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Waterbirds of Lake Baikal, eastern Siberia, Russia

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Lake Baikal lies in eastern Siberia, Russia. Due to its huge size, its waterbird fauna is still insufficiently known in spite of a long history of relevant research and the efforts of local and visiting ornithologists and birdwatchers. Overall, 137 waterbird species have been recorded at Lake Baikal since 1800, with records of five further species considered not acceptable, and one species recorded only prior to 1800. Only 50 species currently breed at Lake Baikal, while another 11 species bred there in the past or were recorded as occasional breeders. Only three species of conservation importance (all Near Threatened) currently breed or regularly migrate at Lake Baikal: Asian Dowitcher *Limnodromus semipalmatus*, Black-tailed Godwit *Limosa limosa* and Eurasian Curlew *Numenius arquata*.

INTRODUCTION

Lake Baikal (hereafter 'LB') is the largest lake in Siberia and one of the largest in the world. Avifaunal lists of the broader LB area have been published by Gagina (1958c, 1960b,c; 1961, 1962b, 1965, 1968, 1988), Dorzhiyev (1990), Bold *et al.* (1991), Dorzhiyev and Yelayev (1999) and Popov (2004b), but the waterbird fauna has not hitherto been comprehensively reviewed. Here I present such a review, covering LB itself plus adjacent wetlands (including the deltas of rivers opening into LB), and islands in the lake.

Lake Baikal

LB is an oligotrophic lake lying in East Siberia, north of Mongolia, at 51.3–55.5°N 103.4–110.0°E and 460 m. Its eastern and northern part belongs to the Republic of Buryatia, while its western and southern part belongs to Irkutsk Province. Both these administrative units are parts of the Russian Federation. LB fills a continental rift, which originated c.25–30 million years ago. It is c.640 km long and up to 80 km wide, having a shoreline of c.2,100 km and an area of c.31,500 km^2. The rift is 8–9 km deep, but mostly silted up, so the maximum depth of the lake is currently c.1,630 m.

LB is fed by c.360 rivers and brooks. Most are short, coming from mountain ranges surrounding LB, but three inflowing rivers are very large: Verkhnyaya Angara, Barguzin and Selenga, which enter LB from the north, north-east and south-east, respectively. LB has one outflow, the Angara River, which leaves it near its south-western end. The Irkutsk Dam embanked the Angara River in 1956, c.60 km from LB. The lake thawed after the last glaciation, c.10,500–11,000 years ago (Fotiyev 2006), and inflowing rivers then started to bring sediments and form river deltas, which are the most important habitat for waterbirds.

The climate is continental, with hot summers and cold winters. Minimum temperatures (often below -35°C) are reached in January, while maximum temperatures (over +30°C) are reached in July. The huge water masses in LB (c.23.5 km^3) function as a buffer, causing both spring and autumn to start one to two weeks later around LB than elsewhere in the region. The first frosts occur during September to early October, the last being recorded in the first half of June, with a frost-free period of c.100 days. The lake is usually frozen from January to May. Stable snow cover usually lies from October to May. Annual precipitation averages 300–500 mm, with a maximum in July–August and a minimum in February–March.

In the course of past centuries water levels in LB fluctuated considerably (Galaziy 1967, 1972), but the effects on the local avifauna have not been documented. Since the 1950s, the water level in LB has been regulated by the Irkutsk Dam. The resulting seasonal fluctuations of water levels significantly influence the distribution and breeding success of waterbirds (Skryabin 1965, 1967a, 1995b, Skryabin and Tolchin 1975, Lipin *et al.* 1976, Skryabin and Sadkov 1977, Podkovyrov and Shinkarenko 1979, Mel'nikov 1981a, 1982a, Mel'nikov *et al.* 1984a, Podkovyrov 1986b, Kozhova and Pavlov 1995, Sadkov 1995, Fefelov 1996, 1999c).

Additional background on LB was given by Zhukov (1960), Kozhov (1962, 1963, 1972), Verbolov *et al.* (1965), Galaziy and Lut (1969), Votintsev *et al.* (1975), Logachev (1976), Florensov (1977), Ladeyshchikov (1982), Fialkov (1983), Mizandrontseva (1985), Rogozin (1992), Imetkhenov (1997), Kozhova and Izmet'yeva (1998), Touchard (1998) and Minoura (2000).

Waterbird habitats

LB offers a variety of habitats for waterbirds, including the following:

Rocky cliffs: present all around LB, but of minor importance for waterbirds, offering suitable nesting sites for just three species: Great Cormorant *Phalacrocorax carbo*, Red-breasted Merganser *Mergus serrator* and Yellow-legged Gull *Larus cachinnans*.

Rocky shores: present around LB in places, but of minor importance for waterbirds, serving as resting habitat for gulls and Common Sandpiper *Actitis hypoleucos*.

Gravel beaches: found especially on the south-eastern shores, where they are of minor use for waterbirds, and in the Maloye More area, where they are a low-quality, but frequently used stopover habitat for migrating waders (Anthes *et al.* 2004).

Sandy beaches: uncommon, but can be found at most river deltas. No birds regularly breed on sandy beaches, but they are frequented during migration by various waders, mainly *Calidris* sandpipers, *Charadrius* plovers, and Caspian Tern *Sterna caspia*.

Salt lakes: occur on Ol'khon Island and a nearby plateau between the Anga River and Sakhyurta village. They are favoured by breeding Ruddy Shelduck *Tadorna ferruginea*, but are usually avoided by other waterbirds.

Brooks: occur on steep hillsides, but are usually avoided by waterbirds, except Harlequin Duck *Histrionicus histrionicus*, and Solitary Snipe *Gallinago solitaria* in winter.

Large rivers: generally of limited use for waterbirds from spring to autumn. However, the Angara outflow,

which usually does not completely freeze during winter, enables some duck species to overwinter, in particular Common Goldeneye *Bucephala clangula* and Common Merganser *Mergus merganser* (Tret'yakov 1940, Tarasov 1952, Pastukhov 1961, 1965, Gagina 1966, Skryabin 1975, Mel'nikov and Shcherbakov 1988, 1989, 1990, Mel'nikov *et al.* 1988a, 1989, 1998, Fefelov 1997, 1998a, Podkovyrov 1998, Fefelov *et al.* 1999b, Mel'nikov 2000f,l).

Grassy marshes: occur in river deltas; their extent depends on the amount of silt brought by river streams and the configuration of the lake bottom at the river estuary. The largest marshes are found in the deltas of Verkhnyaya Angara (560 km^2), Barguzin (350 km^2) and Selenga (1,100 km^2) rivers, with smaller marshes occur in the deltas of Goloustnaya, Sarma, Muya, Tyya, Frolikha, Ayaya, Tompuda, Bol'shaya Cheremshana and Kultuchnaya. Water plants either grow on the ground, or form floating mats of vegetation, which are often used as breeding habitat by a variety of ducks, waders, gulls and terns.

Sphagnum bogs: occur in large river deltas, but are of minor importance for waterbirds, although some ducks or waders may breed in them.

Reedbeds: occur locally in larger river deltas, and provide breeding habitat for Common Coot *Fulica atra* and some duck species.

Taiga: the drier parts of river deltas and the lower hill slopes surrounding LB are covered with high *Pinus* taiga, in which Smew *Mergellus albellus* and Common Goldeneye breed in tree holes.

History of research

The history of research of Baikal waterbirds goes back to the 1770s, but the area was only weakly studied in this respect until the mid-twentieth century (Gagina 1960d, Izmaylov *et al.* 1963, Tolchin 1982, 1985, Skryabin 2000, Mlíkovský 2002). Significant expeditions prior to 1950 are listed below:

1772: Johann Gottlieb Georgi (1738–1802), a German naturalist in Russian service, travelled around the northern end of LB in summer 1772 and provided the first reliable data on its waterbirds (Georgi 1775).

1855: Gustav Radde (1831–1903), a German naturalist in Russian service, travelled around the northern end of LB in summer 1855 on behalf of the newly founded (1851) Siberian Branch of the Russian Geographic Society (Radde 1856, 1857, 1861a,b, 1863).

1855: Richard Maack (1825–1886), a German-Russian naturalist, made a few ornithological observations in the Selenga Delta on his journey from Irkutsk to the Amur (Maack 1869).

1869–1877: Benedykt Dybowski (1833–1930), a Polish zoologist exiled to Siberia for his participation in the Polish 1863 uprising against Russian supremacy, resided in Kultuk at the southernmost corner of LB in January 1869–August 1872 and February 1876–June 1877 (see, e.g., Dybowski 1912, 1930, Kowalska and Miklaszewska-Mroczkowska 1960, Brzęk 1984, Kozhova and Shostakovich 2000, Mlíkovský 2007). Dybowski was accompanied and assisted in Kultuk by his fellow Polish exiles Wiktor Godlewski (1830–1900) and Michal Jankowski (1840–1903). He published only few remarks on Baikal waterbirds (Dybowski and Godlewski 1879), but sent collected specimens to Wladyslaw Taczanowski (1819–1890) in Warsaw, Poland, from where they were partly distributed to other European museums. The results were published by Taczanowski (1871a,b, 1873, 1877, 1893), Cabanis (1870), and Colston (1975); see also Taczanowski (1872, 1889), Sztolcman and Domaniewski (1927), and Mlíkovský (2007). Dybowski's other collections and field-notes were deposited in Irkutsk, Russia, in the museum of the Siberian Branch of the Russian Geographic Society, where they were destroyed in the city fire of 1879.

1913: Franz Schillinger (1875–after 1913), an Austrian natural history dealer, then based in Nizhniy-Novgorod, Russia, collected birds around LB in January–October 1913 (Keve 1948).

1914–1915: G. G. Doppel'mayr, a Russian zoologist, made some ornithological observations at north-eastern Baikal (Doppel'mayr 1926).

1922–1923: Sergey Sergeyevich Turov (1891–1975), a Russian naturalist, studied birds of the north-eastern part of LB (Turov 1923, 1924a,b).

1930: Boris Karlovich Shtegman (1898–1975), a Russian ornithologist, travelled around the northern end of LB in summer 1930 (Shtegman 1936).

1931: V. F. Dyagilev and V. P. Favorskiy, Russian naturalists, collected birds on the Svyatoy Nos isthmus (Dyagilev and Favorskiy 1931, Gagina 1960a).

1933: A. V. Tret'yakov, a Russian zoologist, made ornithological observations on Ol'khon Island (Tret'yakov 1934).

1933–1949: M. G. Bakutin, a Russian zoologist, studied the birds of the Selenga Delta (Bakutin 1950, 1957).

Systematic research on the waterbirds of LB started only in the 1950s (see Mlíkovský 2002), when significant observations were made by Tat'yana Nikolayevna Gagina (1925), Oleg Kirillovich Gusev (1930), Leonid Ivanovich Malyshev (1931) and Nikolay Georgiyevich Skryabin (1933–2001).

Geography of research

For the purposes of this review, LB was subdivided into the segments defined below (see also Fig. 1, at end). Individual geographic segments of LB (as defined above) were studied to different degrees according largely to their accessibility and ornithological importance. Faunistic and other general papers regarding waterbirds are given for individual segments below (papers on individual species are excluded):

NWB = north-western Baikal, from Kocherikovskiy Cape in the south to Nizhneangarsk in the north. Less important for waterbirds; see Malyshev (1960a), Mel'nikov and Reukov 1989, Popov *et al.* (1996, 1998, 2002) and Olovyannikova (1998, 1999, 2000a,b).

VAD = Verchnyaya Angara delta, from Nizhneangarsk in the west to Kichera in the north, and Dagary in the east. Includes the ornithologically very important delta of the Verkhnyaya Angara River. See Votintsev (1942), Gagina (1954), Skryabin (1969, 1971a,b, 1975), Skryabin and Sadkov (1977), Sadkov and Safronov (1984, 1986, 1988), Sadkov *et al.* (1986) and Sadkov (1991, 1995).

NEB = north-eastern Baikal, from Dagary in the north to Kudaldy in the south. Less important for waterbirds; however, zoologists were based in the headquarters of the Barguzinskiy Reserve, Davsha (founded in 1917), which resulted in a number of local records. See Turov (1923,

1924a,b), Gusev (1960c), Malyshev (1960b), Skryabin (1960, 1961, 1969, 1971a,b, 1975), Skryabin and Filonov 1962), Gusev and Ustinov (1965), Filonov (1978), Belyaev (1980, 1982, 1984), Ananin (1986, 1995, 2000) and Ananin and Fedorov (1988).

MM = Maloye More: an area from Ol'khonskiye Vorota Strait in the south to Kocherikovskiy Cape in the north, including Ol'khon Island and all islets between this island and the western shore of LB. Ornithologically important segment, which includes deltas of several small rivers and Ol'khon Island. See Gusev (1962), Litvinov (1962, 1963, 1971, 1972, 1976, 1980a,b, 1982, 1990), Litvinov and Gagina (1977), Litvinov *et al.* (1977), Pyzh'yanov and Sonin (1979), Pyzh'yanov *et al.* (1979, 1984, 1997, 1998), Skryabin and Pyzh'yanov (1987), Litvinov and Petrochenko (1990), Skryabin (1995a) and Anthes *et al.* (2004).

UI = Ushkan'i Islands: an isolated group of islands lying north-west of Svyatoy Nos Peninsula. Less important for waterbirds. See Gusev (1960a), Litvinov and Molozhnikov (1969), Litvinov and Matveychuk (1977), Litvinov (1980b, 1982), Matveychuk (1982, 1983, 1990, 1991) and Litvinov and Petrochenko (1990).

SNI = Svjatoy Nos, from Kudaldy in the north to Ust'-Barguzin in the south, including Svyatoy Nos isthmus, Svyatoy Nos Peninsula, and Chivyrkuyskiy and Barguzinskiy bays. Includes ornithologically very important wetlands on the Svyatoy Nos isthmus and in deltas of small rivers in Chivyrkuyskiy Bay. See Gusev (1960b, 1962), Molozhnikov (1974), Yegorov (1980, 1981), Yumov (1990), Heyrovský *et al.* (1992) and Stýblo and Mlíkovský (1992).

SWB = south-western Baikal, from Ol'khonskiye Vorota Strait in the north to Slyudyanka in the south. Less important for waterbirds. See Dybowski and Godlewski (1870), Dorzhiyev and Yesheyev (1991), Skryabin (1995a) and Bogorodskiy (1989, 1998).

SD = Selenga Delta in the broad sense, from Oblom Cape in the north to Selenginsk in the east and Boyarsk in the south. Includes ornithologically very important wetlands in the Selenga Delta. See Bakutin (1950, 1957), Shvetsov (1965), Shvetsov and Shvetsova (1967), Mel'nikova and Klimenko (1979), Podkovyrov and Shinkarenko (1979, 1986), Shinkarenko (1979, 1983, 1984a,b, 1986), Mel'nikov (1979a, 1981a,b, 1982b, 1984a, 1988a, 1990c, 1998a,b, 2000a, 2007), Vasil'chenko and Unzhakov (1982), Mel'nikov *et al.* (1984a,b), Skryabin (1969, 1971a,b, 1975, 1986, 1995b,c, 1998), Podkovyrov and Podkovyrov (1986), Skryabin *et al.* (1989b), Durnev *et al.* (1990), Tupitsyn and Podkovyrov (1990, 1996), Zhuravlev *et al.* (1991), Tupitsyn (1991, 2000), Fefelov (1991, 1995, 1996, 1999b,c, 2003a), Tupitsyn and Fefelov (1995a), Fefelov *et al.* (1995a,b, 1998, 1999a, 2001), Baskakov and Vinogradov (1998) and Fefelov and Tupitsyn (2004, 2006).

SEB = south-eastern Baikal, from Ust'-Barguzin in the north to Slyudyanka in the south, excluding the Selenga Delta. Less important for waterbirds: no faunistic reports are available.

In addition, faunal dynamics and zoogeographical aspects of the LB avifauna were evaluated by Gagina (1962c,d), Dorzhiyev and Yelayev (1995b), Pyzh'yanov (1998b), Fefelov (1998b, 1999b, 2000a, 2003b), Fefelov *et al.* (1999c) and Dorzhiyev (2000).

MATERIAL AND METHODS

The material presented here is based on data I collected during five expeditions to LB between 1991 and 2005, supplemented by an extensive literature search and a limited survey of museum specimens.

Fieldwork

During my expeditions to LB in 1991–2005, I made ornithological observations in Zabaykal'skiy National Park (including Svjatoy Nos isthmus and peninsula, Chivyrkuyskiy Bay and Barguzinskiy Bay), adjacent parts of the lower Barguzin River, and LB shores between Gremyachinsk and Ust'-Barguzin, on 30 July–31 August 1991, 3–14 June and 21 June–1 September 1993, 15–20 June and 4 July–21 September 1994, 11 June–1 July 2001, and 13–17 July 2005.

Published reports

I attempted to extract data from all publications relevant to the waterbirds of LB. The following comments need to be made on the interpretation of records published in local ornithological literature in the twentieth century:

- Reports were often published as abstracts in symposium volumes. I did not list such abstracts if the same data were also presented in full articles, but I referred to abstracts if they remained the only source for a given record.
- Records were often published several times by different authors, and the original observer was often not recorded, and may not have been (any of) the author(s).
- The passive voice was often used in reporting records (e.g. 'was recorded'), but this does not distinguish between observations and collecting of specimens, number of individuals, or the original observer/collector.
- Records were often presented in a generalised form, e.g. two records of singles becoming generalised as 'rare on migration'. Considering repeated publications of records, the use of the passive voice and lack of references to original observers, it is often difficult to trace the basis of statements such as 'recorded as rare migrant'.
- Dates were often presented incompletely, e.g. month only (no year given) or year only (no day or month given).
- Locations were often non-specific, e.g. 'northern Baikal'.
- Records of rarities were often published without any supporting evidence. Records from pre-1850 publications were used only if the taxa concerned were clearly identifiable. Correct identification was assumed for more recent publications (although doubtful identifications are indicated in the species accounts below).
- Reference literature was often not cited in reports of rarities, making it unknown which field guides, if any, the observer used. The only field guide available for Siberia is Flint *et al.* (1968) and, although a respectable achievement for the 1960s, it is now obsolete in many respects and long out of print. Its English translation (Flint *et al.* 1984) was almost inaccessible for local ornithologists, who thus often had to work in the field with only keys for identification of birds in the hand (e.g. Dement'ev *et al.* 1948, Ivanov and Shtegman 1964).
- Summer records were often presumed to offer proof of breeding. This is especially problematic at LB where

the breeding season is short and late spring and early autumn migrants or non-breeding individuals may occur during the breeding season.
- Statements on breeding or migration status were often presented without supporting data; deciphering the grounds for statements such as 'breeds' or 'rare on spring migration' is thus often difficult or even impossible.
- The term 'pair' was often used to describe two birds, not necessarily mated males and females.

Taking these points into account, it is evident that published data include erroneous records, but these are difficult to identify and eliminate. In view of this, I accepted almost all reported observations as valid. This should be borne in mind when considering the list below.

Unpublished reports
Trip reports were available from several European birdwatchers or birdwatcher groups who visited LB in the past twenty years. Although generally well-equipped, these birdwatchers suffered from a lack of suitable field-guides, which, in combination with short visits and high expectations, may explain why trip reports tend to include some rather improbable records. However, I accepted such records in written reports, but rejected them if they were communicated to me in letters, e-mails or verbally.

Authors of unpublished records are cited by acronyms as follows: FZ (František Zicha), JM (Jiří Mlíkovský), JMa (Jiří Malina), MŠ (Miroslav Šálek), PL (Petr Lumpe), PS (Petr Stýblo), TS (Thomas Schubert), and VS (V. Sviečka).

Museum specimens
Most birds collected at LB are held in central Russian museums in St Petersburg and Moscow, although smaller collections exist especially in Irkutsk, Ulan-Ude and Davsha. Foreign museums with significant collections of waterbirds from LB include those in Warsaw, Poland (Dybowski's collection: see Mlíkovský 2007), and Vienna, Austria (Schillinger's collection: see Keve 1948). Relevant specimens are undoubtedly deposited in a variety of other collections but I was able to make only limited use of these data.

Structure of species accounts
Each species account gives, first, the IUCN Red List category for non-Least Concern species (from BirdLife International 2008), then data on distribution, subdivided into a section on old records (pre-1850) and records by geographic segments as defined above (omitted when they contain no records), ordered from the north-east to the south-west. Data are usually presented without comment, even if they are improbable or contradictory. General references were added, where appropriate ('Note'). A general interpretation of the distributional data is then provided ('Assessment'), followed where appropriate by general comments ('Remarks') and taxonomic comments ('Taxonomy'), including alternative species names used widely in the Russian literature. Square brackets indicate species with no confirmed records.

Names and their transliteration
Names of localities, authors and other people which were originally written in Cyrillic script were transliterated into the Latin script using the BGN/PCGN 1949 standards. Transliteration using (a) the currently valid rules of the Russian Federation, which equal the ISO 9:1995 standards (ISO 1995, GOST 2000), and (b) the rules of the Soviet Union in 1983–2000 (GOST 1983), as well as the original Cyrillic spelling, are given in Appendix 1 (localities) and 2 (surnames). If spelling of names varied or if Russian authors translated their names from Cyrillic script using transliteration rules that are no longer valid, I transliterated the original spelling anew using the above-mentioned rules (see Mlíkovský in press). Spelling used in particular publications is given in brackets in the References.

Classification and nomenclature
Scientific and English nomenclature follows Inskipp *et al.* (1996) where possible, and Dickinson (2003) in other cases. The sequence of Inskipp *et al.* (1996) has never been used by Russian faunists, so I used the conventional sequence as adopted, with minor variation, by Stepanyan (2003) and Koblik *et al.* (2006). Species limits in Asian birds are in flux, and many subspecies are now being elevated to species rank (e.g. Collar 2003, 2006, 2007). I thus added comments on such cases, where appropriate, except for vagrants.

Terminology
The region of several hundred km around LB is usually referred to as *Pribaykal'ye* ('Around-Baikalia'), that west of LB as *Predbaykal'ye* ('Cis-Baikalia') and that east of LB as *Zabaykal'ye* ('Trans-Baikalia'). Waterbirds are divided in the Russian-language literature into *vodoplavayushchiye ptitsy* ('swimming birds') and *okolovodnyye ptitsy* ('around-water birds' or 'near-water birds'). The former group (which I translated as 'aquatic birds') includes swimming and diving species (loons, grebes, ducks, swans, cormorants, etc.), while the latter group (which I translated as 'wading birds') includes a variety of wetland species (storks, herons, rails, waders, gulls etc.). These terms are frequently found in titles in the References.

Three methods of recording birds are distinguished in the following text. Birds were listed as 'seen/observed' or 'collected' if the method is known, or 'recorded' if the method is unknown. 'Collected' means that the specimen was killed and examined in hand, but not necessarily that it entered a museum collection.

The Julian calendar was used in Russia until 1918, when it was replaced by the Gregorian calendar. Standard abbreviations are used: OS (old style) for the Julian, and NS (new style) for the Gregorian calendar.

Species were classified as 'vagrants' if they have been recorded at LB only a few times, 'rare visitors' if they have been recorded repeatedly but apparently not as regular migrants, and 'rare migrants' if they visit on migration in very small numbers and/or not every year. Considering the unequal ornithological coverage of LB in time and space, the assignment of individual species to these categories should be regarded as tentative.

SPECIES LIST

Red-throated Loon *Gavia stellata*
NWB: a family with young observed at Kotel'nikovskiy Cape on 18 August 1930 (Shtegman 1936). **VAD:** eight, including four juveniles collected on 1–10 August 1913

(Keve 1948); reported as breeding in Kichera Delta (Turov 1924a); recorded on migration (Gagina 1954); recorded in small numbers in June 2005 at Nizhneangarsk and at Yarki Island (Hellström 2005). **SNI:** uncommon breeder (Turov 1923, 1924b, Gagina 1960a, Skryabin and Filonov 1962); common in 1991 (Heyrovský *et al.* 1992), 1993 (JM, PS) and 1994 (JM, PS). **SD:** rare, but regular non-breeding visitor (Bakutin 1950, Shvetsov and Shvetsova 1967, Izmaylov and Borovitskaya 1973, Mel'nikov 2000a,j, Fefelov *et al.* 2001, Fefelov and Baskakov 2001). **Assessment:** Widespread, but uncommon breeder in northern LB, south to SNI. Rare migrant and summer visitor elsewhere. **Remarks:** Breeds also on mountain lakes in northern LB (Malyshev 1960a,b, Popov *et al.* 1998, Mel'nikov 2000j).

Black-throated Loon *Gavia arctica*
VAD: breeds (Gagina 1954). **SNI:** common breeder (Turov 1923, Gagina 1960a, Skryabin and Filonov 1962, Heyrovský *et al.* 1992, Fefelov *et al.* 2001, JM in 1993 and 1994). **SWB:** reportedly seen on migration at Kultuk (Dybowski and Godlewski 1870), but never later observed in south-west LB (Bogorodskiy 1989); an adult seen at Bol'shaya Rechka on 7 June 1989 (SOF 1989). **SD:** recorded, but no other data presented (Gagina 1961); not recorded in 1960s (Shvetsov and Shvetsova 1967); recorded on 25 September 1979 (Fefelov *et al.* 2001) and in July 1981 (Mel'nikov 1984a, 1998b); recorded repeatedly in summer, but no proof of breeding obtained (Mel'nikov 1998b, 2000a). Breeding confirmed in 1989, when a nest was found at Karbaznoye Lake on 29 May (Tupitsyn and Fefelov 1995a, Mel'nikov 2000a); breeding population estimated at 2–4 pairs in 1990s (Tupitsyn and Fefelov 1995a, Mel'nikov 1998b, 2000a, Fefelov *et al.* 2001); a pair with two young seen at Srednyaya Channel on 9 July 2002 (Fefelov *et al.* 2003); three birds seen flying at Istomino on 29 May 2008 (Holmstedt 2008). **Assessment:** Widespread and common breeder in northern LB, rare and local breeder in southern LB. **Remarks:** Breeds also on mountain lakes in northern LB (Shtegman 1936, Belyaev 1980). **Taxonomy:** Koblik *et al.* (2006) indicated that Black-throated Loons breeding at LB and in the adjacent steppe region belong to an as yet undescribed subspecies.

Yellow-billed Loon *Gavia adamsii*
NEB: one collected at Bol'shaya River in Barguzinskiy Reserve in June 1963 (Belyaev 1980). **Assessment:** Vagrant.

Loon *Gavia* sp.
Pre-1850: common at LB (Georgi 1775). **VAD:** recorded in summer 1855 (Radde 1861b). **Note:** It remains unknown whether these authors meant Red-throated or Black-throated Loon or both.

Great Crested Grebe *Podiceps cristatus*
VAD: recorded, assumed to breed (Tolchin 1979); breeds (Tolchin *et al.* 1974, Sadkov and Safronov 1991); regularly encountered 27 May–7 June 1991 (Olsson 1991). **NEB:** one seen at Davsha Delta on 5 May 1986 (Ananin 1995). **SNI:** first recorded in 1977; four nests found in 1978, 28 in 1979 (Yegorov 1980, 1981), 21 in 1982, 26 in 1986, 67 in 1988, 201 in 1989 (Podkovyrov *et al.* 1991a,b); many dozens at Kovrizhka on 14 July 1994 (JM, PL); a flock of 40 adults with young at Kopeshka on 2 August 1994 (PS); also recorded breeding in 1991 (Heyrovský *et al.* 1992); breeds (Podkovyrov 1986b, 2000). **SWB:** rare migrant (Bogorodskiy 1989). **SD:** recorded, assumed to breed (Gagina 1961, Shvetsov and Shvetsova 1967). Common breeder from the early 1980s (Podkovyrov 1982, 1988), with a stable population estimated at 300–450 pairs (Podkovyrov 1988); breeds (Podkovyrov 2000). **Assessment:** Locally common breeder in large wetlands (VAD, SNI, SD); rare migrant elsewhere. Colonised LB in 1970s.

Red-necked Grebe *Podiceps grisegena*
VAD: single pairs observed in July 1973 and July 1974, and a nest with two eggs found on 30 June 1975 (Tolchin *et al.* 1979); a pair with two chicks seen at Dushun Channel in August 1983 (Mel'nikov *et al.* 1997). **SNI:** first recorded in 1988 (Yumov 1990); breeding confirmed in 1991 (Heyrovský *et al.* 1992); recorded in Barguzinskiy Bay on 5 June 1993 (JM); a nest found at Kedrovka on 23 June 1993 (JM); two flightless young in marshes at Kedrovka on 11 September 1994 (PS); breeds (Podkovyrov 2000). **SD:** recorded during 1955–1962 (Gagina 1961, Shvetsov and Shvetsova 1967); adults with two chicks observed in late July 1976 at Khirel'da Channel, and two pairs showing breeding behaviour recorded in 1982 (Yu. Mel'nikov in Podkovyrov 1986a, Mel'nikov 1998b); a pair recorded on Kondakovskiy Island on 17 July 1981 and 23 June 1982 (Mel'nikov 1998b); a juvenile recorded on 25 June 1983 and a pair with two chicks seen on 9 August 1983 (Podkovyrov 1986a); an adult with a juvenile recorded on Kondakovskiy Island on 13 June 1989 (Mel'nikov 1998b); breeds (Podkovyrov 1986b, 2000); no later records available (Fefelov *et al.* 2001); one seen on a lake between Srednyaya and Kolpinnaya Channels on 2 July 2002 and one (perhaps the same) seen at Chasovenskiye Lakes on 3 July 2002 (Fefelov *et al.* 2003); one seen at Ranzhurovo on 15 June 2004 (Haldén 2004). **Assessment:** Formerly vagrant, a local and rare breeder from the 1970s. **Taxonomy:** Red-necked Grebe spread to LB from the east, which indicates that individuals may belong to the subspecies *holboellii* (*sensu lato*, e.g. Dement'yev 1951, Kurochkin 1982, Fjeldså 2004). However, East Siberian Red-necked Grebe winter along East Asian shores from Sakhalin south to China (Kurochkin 1982), which indicates that they are isolated from Nearctic populations, which breed mainly in Canada and winter along North American shores (Stout and Nuechterlein 1999). Further taxonomic study is thus required. If taxonomically separated, East Siberian Red-necked Grebe should bear the name *P. g. bergmani*.

Horned Grebe *Podiceps auritus*
VAD: recorded (Gagina 1961); one seen on 30 June 1975 (Tolchin *et al.* 1979); rare on spring migration in 1976–1977 (Tolchin *et al.* 1979). **NEB:** recorded on migration (Skryabin and Filonov 1962). **SNI:** recorded in summer (Skryabin and Filonov 1962); one recorded at Barmashevyye Lakes on 21 August 1991 (JM in Heyrovský *et al.* 1992); recorded in Barguzinskiy Bay on 5 June 1993 (JM); recorded at Kedrovka on 24 June 1993 (MŠ); a nest found in marshes at Kedrovka on 13 June 1993 (MŠ); a pair seen in marshes at Kedrovka on 9 June 1998 (PS). **SWB:** rare on spring migration at Kultuk (Taczanowski 1873); recorded 15 km south-east of Yelantsy in June

1995 (Ryabtsev and Popov 1995); a female with a chick seen 20 km north-west of Yelantsy on 12 August 1995 (Pyzh'yanov *et al.* 1997). **SD:** recorded (Gagina 1961); a pair observed on 16 May 1972 (Yu. Mel'nikov in Podkovyrov 1986a); chicks recorded in 1983 near Selenginsk, where a local population was said to exist (Podkovyrov 1986a, Fefelov *et al.* 2001); a chick seen at lower Yepishkinaya Channel on 10 July 1991 (Mel'nikov 2000a); one seen on a lake between Galutay and Glukhaya Channels on 30 May 2002 (Fefelov *et al.* 2003). **SEB:** recorded on migration (Izmaylov and Borovitskaya 1973). **Assessment:** Local and uncommon breeder. **Taxonomy:** East Siberian Horned Grebe is usually included in the widespread Palearctic nominotypical subspecies. However, it seems to be more closely allied to the North American subspecies *cornutus* (Fjeldså 1973, 2004) and its wintering grounds in eastern Asia seem to be isolated from other populations of this Holarctic species (Dement'yev 1951, Kurochkin 1982, Stedman 2000). East Siberian populations thus may belong to an unnamed form.

Black-necked Grebe *Podiceps nigricollis*
VAD: a pair seen on 19 May 1978 (Tolchin *et al.* 1979); breeds (Podkovyrov 2000). **NEB:** recorded on migration in Barguzinskiy Reserve (Ananin and Fedorov 1988). **MM:** recorded (S. Pyzh'yanov in Fefelov *et al.* 2001). **SNI:** not recorded in 1991–1994 and 2001 (JM, PS). **SWB:** recorded at Krestovskiy Cape (Ryabtsev and Popov 1995). **SD:** recorded on 9 September 1971 (27 individuals, including young; Tolchin *et al.* 1979); a juvenile on 1 September 1974 (Vasil'chenko 1987), two individuals on Cherkalovskiy Lake in June 1978 (Tolchin *et al.* 1979). Common breeder from the early 1980s to 1997, with up to 1,000 pairs in 1985 (Podkovyrov 1986c, 1988). A sharp decline in water levels in 1998 caused the breeding population to decline to a few dozen pairs (Fefelov *et al.* 2001). **Assessment:** Colonised LB in the late 1960s or very early 1970s from the south (SD), reaching the north (VAD) in 1990s. Breeding limited to large wetlands (SD, VAD); rare migrant and visitor elsewhere. **Remarks:** Recorded also in Kumora basin at the northern end of LB in 1990s (Mel'nikov *et al.* 1997). **Taxonomy:** Often referred to as *P. caspius* or *Colymbus caspius* in Russian literature.

Little Grebe *Tachybaptus ruficollis*
SWB: one collected at Tal'tsy in autumn 1954 (Gagina 1961). **Assessment:** Vagrant. **Remarks:** Three further records of Little Grebes are available from wetlands in the wider vicinity of Irkutsk, just east of the southern end of LB, including September 1995 (Bogorodskiy 1998), September 1997 (Ryabtsev and Fefelov 1997) and November 2000 (Fefelov 2000b).

Great Cormorant *Phalacrocorax carbo*
Pre-1850: very common all over LB, breeds mostly on cliffs, sometimes in tall trees (Georgi 1775). **NWB/VAD/NEB:** vagrants recorded in 1982, 1987 and 1991 (Pyzh'yanov *et al.* 1997). **NEB:** three recorded at Kosheli Bay on 3 October 1975 (Belyaev 1980); unspecified record at Muzhinay Cape in 1979 (Popov 1993d). **MM:** common in 1933 (Tret'yakov 1934); common in 1930s with breeding records from Arul Cape, Ol'khonskiye Vorota and western shore of Ol'khon Island from Ol'khonskiye Vorota to Khoboy Cape (Popov 1993d); sharp decline in 1940s (Popov 1993d); seven nests on Borgadagan Islet, a nest on Ol'khon near Tashkay village, and a pair seen on Ol'khon near Khuzhir, all in 1961 (V. Sonin in Popov 1993d); two nests on Kobyl'ya Golova Cape in 1962 (Popov 1993d); a nest near Tashkay village in 1964 (Popov 1993d); no more breeding records (Popov 1993d); vagrants observed between 1979–1986 and 1992–1996 (Pyzh'yanov *et al.* 1997, Popov 1993d). Started to breed again in the mid-2000s (I. Fefelov *in litt.* 2008). **SNI:** 'thousands' seen in Barguzinskiy Bay on 16 August 1855 (Radde 1857, 1861b: 213); four juveniles collected on 18–23 August 1913 (Keve 1948); common in SNI in 1920s–1930s (Turov 1923, Shtegman 1936, Novikov 1937); disappeared from Chivyrkuyskiy Bay in 1954, with only a few later records, including one collected on 5 May 1955 (Skryabin and Filonov 1962); four nests found on Kameshek-Bezymyannyy Islet on 20–25 June 1957 (Gusev 1959, 1960b); a nest found on same islet in 1969 (Litvinov 1972; this being the last breeding record); two individuals recorded on 12 September 1973 and one recorded on 4 June 1976 (Shkatulova 1980), one(?) individual recorded on Malyy Arangatuy Lake in 1977 (Yegorov 1980). **SWB:** common at Kultuk, arriving in spring in late May [= around 10 June NS]; breeds on LB cliffs (Taczanowski 1873). Common breeder between Listvyanka and Kultuk in the nineteenth century according to Gusev (1980), but Dybowski and Godlewski (1870) knew cormorants only on migration at Kultuk. A large breeding colony (several hundred birds) seen on Baklaniy Kamen' in 1855 (Radde 1861b: 211–213). The few records since 1950 include one recorded at Goloustnaya Delta on 14 May 1984 (M. Makarov in Bogorodskiy 1989), and an unspecified record at Krestovskyy Cape in 1985 (Popov 1993d). **SD:** breeding never recorded, common on migration in 1930s–1940s (Bakutin 1950, Gusev 1980); only vagrants recorded in 1970s–1990s (Pyzh'yanov *et al.* 1997, Fefelov *et al.* 2001); last vagrant recorded on 11 May 1994 (Pyzh'yanov *et al.* 1997, 1998, Mel'nikov 2000a). Started to breed again in the mid-2000s (I. Fefelov *in litt.* 2008); ten seen at Istomino on 29 May 2008 (Holmstedt 2008); one seen on 2 June 2008 and six seen on 3 June 2008 at Alimasovo (Hellström 2008). **SEB:** one recorded at Baykalskiy Priboy on 3 August 1972 (Shkatulova 1980); one observed between Slyudyanka and Baykalsk in early June 1979 (V. Razvozzhayev in Bogorodskiy 1989). **Note:** Common at LB (Cherepanov 1859); two large colonies seen on the western shore of LB (Radde 1863). **Assessment:** Widespread and locally common breeder on cliffs in southern and central LB until the 1940s, when population sharply declined, possibly in consequence of extensive egg collecting during World War II (Vasil'chenko and Prokop'yev 1988a, Popov 1993d). Last breeding was recorded in 1969 (SNI). Vagrant from the 1970s to the 2000s. Started to breed again (SD, MM) in the mid-2000s (S. Pyzh'yanov in press *fide* I. Fefelov *in litt.* 2008), but no further detail available. **Remarks:** The nearest surviving Great Cormorants inhabit Mongolia, and differ in breeding on the ground, not on cliffs or trees (cf. Sum'yaa and Skryabin 1989).

Dalmatian Pelican *Pelecanus crispus*
Vulnerable. **Pre-1850:** recorded in 1739 (G. W. Steller in Hintzsche *et al.* 1998); common all over LB in 1772

(Georgi 1775). **SWB:** recorded at Listvennichnoye in August 1954 (Gagina 1962, 1964); juvenile male shot at Goloustnaya Delta in late September 1964 (Zharov and Miteyko 1967a,b). **Assessment:** Said to breed at LB in the eighteenth century (Gagina 1964, Fefelov *et al.* 2001), but observations by Steller and Georgi are not conclusive. Pelicans were not recorded at LB in 1855 by Radde (1861b) or in 1869–1871 by B. Dybowski (see Taczanowski 1893), so the species presumably disappeared as a breeder or ceased commonly to visit LB between the late eighteenth century and mid-nineteenth century. Vagrant subsequently (see also Mel'nikov 2000c).

GREAT BITTERN *Botaurus stellaris*
Pre-1850: recorded in 1772 (Georgi 1775). **VAD:** breeds (Gagina 1954); one recorded at Kichera on 7 June 1991 (Olsson 1991). **NEB:** rare visitor in Barguzinskiy Reserve (Ananin and Fedorov 1988). **MM:** rare on migration on Ol'khon Island (Litvinov and Gagina 1977). **SNI:** recorded (Gagina 1958b); calls repeatedly heard in spring (Skryabin and Filonov 1962); repeatedly heard at Kedrovka on 4–22 June 1993 (JM, MŠ, PS); heard in southernmost Chivyrkuyskiy Bay on 21 June 2001 (PS); heard at Kedrovka on 24 June 2001 (JM). **SD:** breeds; population estimated at 20–30 pairs in 1970s, and was 'at least double that size' in 1980s (Mel'nikov 1984a, 1998b, Fefelov *et al.* 2001). **Assessment:** Uncommon breeder in large wetlands (confirmed in SD, possible in SNI and VAD); rare migrant and visitor elsewhere.

GREAT EGRET *Casmerodius albus*
SD: recorded once during 1955–1962 (Shvetsov and Shvetsova 1967); one seen on 27 July 1985 at the mouth of Shamanka Channel (I. Tupitsyn and V. Podkovyrov in both Fefelov *et al.* 2001 and Fefelov and Baskakov 2001). **Assessment:** Vagrant.

GREY HERON *Ardea cinerea*
Pre-1850: very common breeder in northern LB in 1772, common elsewhere (Georgi 1775). **NEB:** two nests found on 27 June 1972 south-west of Davsha village; rare spring migrant on 7–15 May; rare in autumn: records (locality not specified) include 14 August 1957 and 30 August 1976 (Belyaev 1980). **VAD:** male collected on 7 August 1913 (Keve 1948). **MM:** two individuals seen on Ol'khon Island in late August 1973 (Litvinov and Gagina 1977, Tolchin 1993a); breeding recorded in 1976 (Litvinov *et al.* 1977); two pairs bred on Bol'shoy Toynak Islet in 1984–1985, and a pair bred on Borgadagan Islet in 1988 (Pyzh'yanov *et al.* 1997); regularly seen on autumn migration (Pyzh'yanov 1997). **SNI:** many seen at Arangatuy Lake (Turov 1923, 1924a); recorded, breeding assumed (Gagina 1960a); common on migration, breeding considered possible (Skryabin and Filonov 1962); a breeding colony found in a pine forest at the entrance to the Zabaykal'skiy National Park in 1991 with 50 individuals estimated, including fledged juveniles (PS in Heyrovský *et al.* 1992); several dozen pairs in 1993, 1994, 2001 and 2005 (JM, PS); non-breeding individuals recorded on 16–19 June 2001 in the Bol'shoy Chivyrkuy Delta (JM, PS). **SWB:** recorded at Kultuk (Taczanowski 1893); two individuals collected at Kultuk on 1 September 1913 (Keve 1948); vagrants, including one on 3 May 1980 at Bol'shiye Koty; 1–2 on 11–12 May 1979 and nine on 19 August 1974 at Goloustnaya Delta, three on 17 August 1980 at Kadil'nyy Cape, and 14 on 23–26 July 1983 at Anga Delta (Bogorodskiy 1989, Tolchin 1993a). **SD:** rare breeder in 1930s–1940s (Bakutin 1950) and during 1955–1962 (Shvetsov and Shvetsova 1967); first large colony found in 1972 (Lipin *et al.* 1975); 1,700–1,900 breeding individuals in 12 heronries estimated in 1973–1979, and 1,000–1,100 breeding individuals in 15 heronries estimated in 1981 (Mel'nikov *et al.* 1981, Mel'nikov 1984a); and 4,500–5,000 individuals in eight heronries estimated in 1994 (Fefelov *et al.* 2001). **Assessment:** Common breeder in large wetlands in eastern LB (SD, SNI); exceptional breeder, rare migrant and rare visitor elsewhere. **Remarks:** Distributional history of Grey Heron at LB may be complex. Georgi (1775) recorded it as common in summer 1772, while Radde (1861b: 218) expressly noted the absence of all herons from LB in summer 1855. The next records are from the early 1920s (SNI) and the species is listed as a common breeder only from the 1970s onwards (see also Vasil'chenko 1974). In Irkutsk Province (at Bratsk Reservoir), Grey Herons started to breed in 1960s (Sonin and Lipin 1969, Tolchin 1993a). The species migrates from LB toward SSW in autumn (Pyzh'yanov 1998b).

CHINESE POND HERON *Ardeola bacchus*
MM: one recorded at Ukhan Cape on Ol'khon Island on 13 June 1998 (Pyzh'yanov 1998a). **Assessment:** Vagrant.

[BLACK-CROWNED NIGHT HERON *Nycticorax nycticorax*
VAD: recorded at Nizhneangarsk on 4 June 1991 (Olsson 1991). **Assessment:** Probably an erroneous record, listed without any supporting evidence.]

ORIENTAL STORK *Ciconia boyciana*
Endangered. **SD:** one observed at lower Galutay Channel on 28 June 1979 (Mel'nikov 2000a). **Assessment:** Vagrant. **Taxonomy:** Often listed as C. *ciconia* in Russian literature.

BLACK STORK *Ciconia nigra*
Pre-1850: recorded around LB on rivers (Georgi 1775). **NWB:** one observed on 19 August 1930 at Kotel'nikovskiy Cape (Shtegman 1936), four recorded at Bol'shoy Solontsovyy Cape on 28 August 1980, two on 25 August 1991, and a juvenile on 31 August–17 September 1997 (Olovyannikova 1998, Popov *et al.* 1999). **VAD:** two pairs possibly bred at Verkhnyaya Zaimka (Pyzh'yanov *et al.* 1997, 1998). **NEB:** an adult collected on 1 July 1915 at Sosnovka (Shtegman 1936). **MM:** rare on autumn migration (Pyzh'yanov *et al.* 1997, 1998). **SNI:** seen four times at different sites on 21 April–10 July 1954 (Malyshev 1960b), two adults seen at Barmashevyye Lakes on 28 July 1991 and one seen between Kedrovka and Barmashevyye Lakes on 30 July 1991 (Heyrovský *et al.* 1992). **SWB:** recorded at Kultuk (Taczanowski 1893); a male collected on 24 September 1913 (Keve 1948); recorded on 11–12 May 1979 at Goloustnaya Delta; one seen on 23–26 June 1983 at Anga Delta; recorded on 4 August 1978 at Tolstyy Cape, and on 11 August 1978 at Polovinnyy Cape (Bogorodskiy 1989); also recorded on migration (without data) at Bol'shiye Koty, Marituy and Slyudyanka (Popov 1993b); one seen at Bol'shoye Goloustnoye on 2 June 2005 (Hellström 2005). **SD:** singles recorded at Khalmeteyevskaya Bay on 10 June 1979 and 14 June 1981 (Mel'nikov 1998b); singles seen

at Shikhty Lakes on 11 June 1989 and 18 June 1991 (Mel'nikov 1998b); individuals or flocks up to 12 birds recorded almost annually in June–August (Tupitsyn and Fefelov 1995b, Pyzh'yanov *et al.* 1997, Fefelov *et al.* 2001, Fefelov and Baskakov 2001); three seen in southern part of the delta on 4 June 2003; one seen at Sherashovo on 5 June 2003 (Madge and McRae 2003). **SEB:** singles seen on 1 and 2 June 2008 at Vydrino (Holmstedt 2008). **Assessment:** Regular non-breeding visitor. **Remarks:** Breeds in small numbers in mountains around LB (Vasil'chenko and Prokop'yev 1988b, Popov 1993b).

Black-headed Ibis *Threskiornis melanocephalus*
Near Threatened. **MM:** one seen at Zama on 22 June 2003 (A. Kotel'nikov in Popov 2004a). **Assessment:** Vagrant. **Remarks:** The only other record in the vicinity of LB is a flock of three birds observed at the Selenga River near Ulan-Ude on 7 May 1990 (Ye. Yelayev in Bold *et al.* 1991, Dorzhiyev and Yelayev 1995a).

Eurasian Spoonbill *Platalea leucorodia*
SNI: recorded in the early twentieth century at Chivyrkuyskiy Bay according to local inhabitants, but no details presented (Mel'nikov 2000g). **SWB:** three recorded in May 1974 at Kultuk (V. Unzhakov in Vasil'chenko 1982, 1987, Popov 1993a, V. Unzhakov in Mel'nikov 2000g). **SD:** recorded repeatedly in the early twentieth century according to local inhabitants, but no details presented (Mel'nikov 2000g); two seen in June 1976 (Vasil'chenko 1982, 1987). **SEB:** one collected at Tankhoy in 1965 (Vasil'chenko 1982, 1987, Mel'nikov 2000g; skin in Tankhoy school). **Assessment:** Rare visitor. **Remarks:** One was observed south-east of LB along the road between Ulan-Ude and Borgoy on 24 May 2008 (Holmstedt 2008).

Greater Flamingo *Phoenicopterus ruber*
NEB: one recorded at Tompa on 11 November 1942 (Gagina 1962, Mel'nikov 2000h). **SWB:** one collected at Kultuk on 22 October 1894 (Pershin 1894). **Assessment:** Vagrant. **Remarks:** More records of vagrant Greater Flamingos are known from Pribaykal'ye, but none is directly from LB (Popov 1993o, Dorzhiyev and Yesheyev 1991, Mel'nikov 2000h, Popov and Khidekel' 2001). **Taxonomy:** Now usually separated as *P. roseus* (Knox *et al.* 2002, Banks *et al.* 2008).

Tundra Swan *Cygnus columbianus*
VAD: one recorded at Dagary on 2 May 1973 (Tolchin *et al.* 1979). **SWB:** recorded at Kultuk in 1869 (Dybowski and Godlewski 1870), on 21 April [= 3 May NS] 1872 and on 12 [= 24 NS] October 1872 (Taczanowski 1877). **SD:** common on spring (16 April–15 May) and autumn (late September–20 October) migration according to Bakutin (1950, 1957), but not recorded in subsequent decades (Shvetsov and Shvetsova 1967, Skryabin 1975, Gagina 1988), which makes Bakutin's report less probable; two birds recorded in a flock of Whooper Swans on 9 May 1984 at Galutay Channel and two birds plus a flock of six birds observed on 5 October 1986 flying along the Selenga upstreams (Fefelov *et al.* 2001, Fefelov and Baskakov 2001). **Note:** See also Popov (1993i). **Assessment:** Vagrant. **Taxonomy:** Species-group names *bewickii* and *jankowskii* were often applied to East Asian Tundra Swans in the Russian literature.

Whooper Swan *Cygnus cygnus*
Pre-1850: widespread at LB (Georgi 1775). **NEB:** single birds or pairs recorded at Pokoynyy Cape on 11 May 1995 and 24 June–28 July 1997, and a flock of 15–20 individuals seen at Pokoynyy Cape on 11 May 1989 (Olovyannikova 1998). **VAD:** said to breed rarely, but no data presented (Izmaylov *et al.* 1983), single pairs breed (Pyzh'yanov *et al.* 1997, 1998), two individuals seen on 6 May 2005 at Yarki Island (Hellström 2005). **NEB:** rare on spring migration on 1–16 May 1959 (Skryabin 1975), rare breeder in Barguzinskiy Reserve (Ananin and Fedorov 1988). **MM:** recorded as a rare migrant on Ol'khon Island (Litvinov and Gagina 1977), one recorded for c.2 weeks in July 1994 on Shara-Nur Lake on Ol'khon Island (Pyzh'yanov *et al.* 1997, 1998). **UI:** rare vagrant on Dolgiy Island (Matveychuk 1991). **SNI:** reported as breeding (Turov 1923, Gagina 1960a, Skryabin and Filonov 1962), nests and a young found at Malyy Chivyrkuy Delta in 1960 (Skryabin 1975), breeding recorded in 1962 (Skryabin 1975), not recorded in 1977–1979 (Yegorov 1980), repeatedly observed but breeding not proved in June–August 1991 (Heyrovský *et al.* 1992), two individuals seen north of Barmashevyye Lakes on 16 June 1994 (JM, PS), two seen at Kedrovka on 18 August 1994 (PS), a nest found in the Bol'shoy Chivyrkuy Delta on 17 June 2001 (JM, PS), a flock of 22 seen in south-eastern Chivyrkuy Bay on 21 June 2001 (JM). **SWB:** rare migrant at Kultuk (Dybowski and Godlewski 1870), a male collected on 24 September 1913 at Angara outflow (Keve 1948), never recorded (Mel'nikov 1993a). **SD:** only singles seen in 1970s (Mel'nikov 1998b), no breeding records until early 1980s (Shinkarenko *et al.* 1990, Fefelov *et al.* 2001), a nest with three eggs found on 5 June 1987 (Shinkarenko *et al.* 1990), a pair with three young seen at Severnaya Channel on 15 June 1989 (Mel'nikov 1998b), local population at Srednyaya Channel estimated at 4 pairs in 1989 (Mel'nikov and Shinkarenko 1997, Mel'nikov 1998b), two adults seen at nest at Ranzhurovo on 15 June 2004 (Haldén 2004); known on migration (Bakutin 1957, Skryabin 1975), numbers of spring migrants varied in 1984–1990 from 10–30 birds per spring to many hundreds, with recorded flocks of 100–220 (Fefelov *et al.* 2001); at least seven seen at Istomino on 29–30 May 2008 (Holmstedt 2008). **Assessment:** Uncommon local breeder, common migrant. **Remarks:** For the distribution of Whooper Swans around LB see also Borovitskaya (1961), and Kel'berg and Prokop'yev (1988).

Swan Goose *Anser cygnoides*
Vulnerable. **Pre-1850:** appears almost every year in southern LB (Georgi 1775). **VAD:** recorded in summer 1855 (Radde 1861b), said to breed rarely, but no evidence presented (Shtegman 1936). **NEB:** adult male collected at Sosnovka on 18 May 1915 (Shtegman 1936). **SNI:** recorded (Dyagilev and Favorskiy 1931), one observed in a flock of *Cygnus cygnus* in southernmost Chivyrkuyskiy Bay on 21 June 2001 (JM, PS). **SWB:** recorded at Kultuk on 19 April [= 1 May NS] and 12 [=24 NS] October 1868 (Dybowski and Godlewski 1870); rare on migration at Kultuk (Taczanowski 1873). **SD:** said to be common breeder in the nineteenth century, but no data presented (Mel'nikov 1997); recorded breeding in smaller numbers in 1930s–1940s (Shtegman 1936, Bakutin 1950, 1957); last breeding recorded in 1963 (Skryabin 1975, Popov 1993h, but see below); 26 observed during 25 April–5

July 1964, but no breeding recorded (Skryabin 1975); a flock of 17 seen at Motaikha Channel on 18 May 1975 (Mel'nikov 1997a); several pairs observed between mid-May and mid-June 1975, but breeding not recorded (Vasil'chenko 1987); two nests found in Kabanskiy Reserve in 1975 and breeding considered probable there in 1977 (G. Beloborodov in Mel'nikov 1997a, 1998b); six seen at Krivaya Channel on 8 June 1977, four seen at Kokuy on 10 June 1977, two seen at Nikulinskaya Bay on 11 June 1977 (Mel'nikov 1997a, 1998b); not recorded subsequently (Mel'nikov 1997a, Fefelov *et al.* 2001). Said to arrive in early April (Bakutin 1957), but first recorded on 25 April in 1964 (Skryabin 1975). Last birds recorded in mid-October (Bakutin 1957). **Assessment:** Formerly regular breeder in SD (last recorded in 1975) and rare visitor elsewhere; now occurs as a vagrant only (see also Vasil'chenko 1988, Collar *et al.* 2001).

Bean Goose *Auser fabalis*

NEB: recorded at Sosnovka on migration in 1914 and/or 1915 (Doppel'mayr 1926); common migrant in early September–early October in 1950s (Skryabin 1961, Skryabin and Filonov 1962). **MM:** rare on spring migration, commoner on autumn migration (Litvinov and Gagina 1977). **UI:** rare migrant (Matveychuk 1991). **SNI:** recorded on migration (Turov 1923, Gagina 1960a, Skryabin 1961, 1975, Skryabin and Filonov 1962); one seen on the southern shore of Chivyrkuyskiy Bay on 1 July 1993 (MŠ). **SWB:** common at Kultuk (Taczanowski 1873, 1893); common migrant, recorded at Peschannaya Bay, Bol'shiye Koty village, Listvennichnoye and Goloustnaya Delta on 28 April–10 May in spring, and on 15 August–7 October in autumn (Korchagin 1936, Bogorodskiy 1989, see also Mel'nikov and Tolchin 1993b). These birds cross the Khamar-Daban mountains on migration (Vasil'chenko and Vasil'chenko 1976). **SD:** flocks seen in April 1855 (Maack 1859); common migrant until c.1950, then declining in numbers, as reflected in annual harvest (mostly taken in autumn): c.15,000 individuals prior to 1950 (Bakutin 1950), 3,000–5,000 in 1950s (Skryabin 1975) and 500–600 in 1960s (Skryabin 1975). Uncommon on migration in 1978–1979 (Shinkarenko 1979) and in 1989–1996 (Fefelov *et al.* 1998, Fefelov *et al.* 2001). **SEB:** Two collected at Utulik on 2 October 1913 (Keve 1948). **Assessment:** Formerly common, now uncommon migrant. Ptushenko (1952) included all LB in the breeding range of the subspecies *sibiricus*, but there is no evidence that the taxon ever bred at LB. **Remarks:** See also Mel'nikov (2001c) and Pyzh'yanov (2003). **Taxonomy:** The taxonomy of *A. fabalis* is highly complex (see Sangster and Oreel 1996, Mooij and Zöckler 1999). In Russian literature, the most widespread treatment is that of Dement'yev (1936, adopted by Ptushenko 1952), which divides continental Eurasian Bean Goose into three subspecies: Western Tundra Goose (*fabalis*), Eastern Tundra Goose (*serrirostris*), and Eastern Taiga Goose (*sibiricus*, preoccupied, replaced with *middendorffii*). Under this arrangement, most birds from SD were assigned to *serrirostris* by Fefelov *et al.* (2001), who stated that *sibiricus* is also present, but in decreasing numbers. Keve (1948) identified two specimens collected in October 1913 at Kultuk as *sibiricus*. Skryabin (1975) suggested that nominotypical *fabalis* occurs in SD, but Fefelov *et al.* (2001) doubted this. Given the location of LB, both *serrirostris* and *middendorffii* are expected to occur, while the occurrence of *fabalis* is improbable, though possible. Ruokonen *et al.* (2008) elevated *middendorffii* to species rank, separating it from *fabalis* (including *serrirostris*).

Greater White-fronted Goose *Auser albifrons*

Pre-1850: See under Lesser White-fronted Goose. **NWB, VAD and NEB:** no direct observations, but Shtegman (1936) was told that Greater White-fronted Goose migrates through northern LB, although in much smaller numbers than Bean Goose. **VAD:** small flocks recorded on 10 June 1958 and 5 June 1959 (Skryabin 1975); one seen at Kichera on 7 June 1991 (Olsson 1991). **SWB:** rare on migration (Taczanowski 1873, 1893); a female collected on 2 October 1913 at Kultuk (Keve 1948). **SD:** a female collected on 3 October 1913 (Keve 1948); rarely recorded on spring migration in late April–early May (Bakutin 1957, Skryabin 1975); recorded on both spring and autumn migration from the 1970s (Fefelov *et al.* 2001). The species was always uncommon, but Mel'nikov's (2000a) observations (if acceptable) indicate that it was rather abundant in the late 1970s: a flock of 2,000 individuals was observed on 22 April 1975 in Khalyun Channel, several thousands migrated over Shamanka Channel on 24 September 1975, and many migrated over Khirel'da Channel on 28 September 1978. **Assessment:** Rare on migration. Mel'nikov's (2000a) statement that this species was common on migration in SD in 1970s has not been supported by other observers.

Lesser White-fronted Goose *Auser erythropus*

Vulnerable. **Pre-1850:** said to be recorded on autumn migration by Georgi (1775), but he did not distinguish it from Greater White-fronted Goose. **VAD:** recorded on migration (Novikov 1937, Gagina 1954). **SWB:** rare on migration (Taczanowski 1873, 1877, 1893); an adult female collected on 2 October 1913 (Keve 1948). **SD:** a juvenile female collected on 3 October 1913 (Keve 1948); voice heard from a flock of Greater White-fronted Geese on 8 May 1934 (Bakutin 1957); 700 on 22 April 1975, 100–150 on 24 September 1975, recorded on 28 September 1978, flocks of 10–15 on 16 September 1985 and 2 October 1989 (Mel'nikov 2000a). **Note:** See also Popov (1993f). **Assessment:** Rare migrant.

Greylag Goose *Auser auser*

Pre-1850: very common at LB (Georgi 1775). **VAD:** common breeder in the mid-nineteenth century (Skryabin 1975); not recorded in 1932 (Novikov 1937). **SWB:** recorded at Kultuk (Taczanowski 1873, 1893). **SD:** common breeder in the mid-nineteenth century (Radde 1856, 1861b, see also Skryabin 1975, Mel'nikov 1997a); rare breeder in 1930s–1940s, with numbers falling sharply during this period (Bakutin 1957); last clutch found in 1936 (Bakutin 1957); not recorded in 1964 (Skryabin 1975); recorded during autumn migration in 1977–1978 in much smaller numbers than Bean Goose (Shinkarenko 1979); a pair were observed at Chasovenskiy Channel from 9 June 1985 until 'the end of the field season', but evidence for breeding was not obtained (Mel'nikov 1997a, 1998b); recorded only three times during 1988–1993, always in flocks of 6–8 individuals between 17–20 September (Fefelov *et al.* 2001). **Assessment:** Common breeder in the nineteenth century, breeding later confined to SD (last recorded in 1930s); now vagrant.

Bar-headed Goose *Anser indicus*
SWB: two collected by W. Godlewski on 7 [= 19 NS] July 1876 (Taczanowski 1893, Alferaki 1904; one deposited in the Museum and Institute of Zoology, Warsaw, checked by JM in 2008). **SD:** two observed on 29 July 1947 at Tolbazhiha Delta (Bakutin 1957). **Note:** See also Popov (1993g). **Assessment:** Vagrant.

Snow Goose *Anser caerulescens*
SWB: rare on migration at Kultuk (Taczanowski 1873, 1877, 1893, Gagina 1962a). This observation was accepted by Skryabin (1975), but rejected by Bogorodskiy (1989). **Assessment:** Formerly a migrant, later becoming a vagrant, with last records around 1870. However, exact date of disappearance of Snow Geese from LB remains unknown, because relevant ornithological observations during 1870–1930 are absent. **Remarks:** Snow Goose bred in north-eastern Asia west to the Lena Delta in the eighteenth (Pallas 1769) and nineteenth centuries, but the population declined sharply during this period (Ptushenko 1952, Takekawa *et al.* 1994). B. Dybowski (in Taczanowski 1873: 108) saw flocks at Kosogol Lake, Krasnoyarsk Province, west of LB (probably in 1864: see Mlíkovský 2007 for his itinerary), and local Tuvans told him that Snow Goose breed there. From the early twentieth century onwards, Snow Goose bred in Asia only on Wrangel Island (Ptushenko 1952, Cooch and Cooch 2005). One was shot at Balandino village west of LB in late September 1990 according to Mel'nikov (1996, 2000d), but it is not apparent whether Mel'nikov saw the specimen or who identified it. **Taxonomy:** Snow Geese on Wrangel Island (the only remnant of the once-widespread Siberian population) are genetically diverse (Kuznetsov *et al.* 1998), which leaves the taxonomic identity of western populations open (see also Quinn 1992).

Brent Goose *Branta bernicla*
SD: A flock of six, one of which was shot, was recorded on 30 April 1981 at Chasovenskiye Lakes (Mel'nikov 2000a). **Assessment:** Vagrant. **Taxonomy:** Fefelov *et al.* (2001) suggested that birds at LB belonged to the subspecies *bernicla*, to which they assigned all birds breeding in Asian tundras east of Yamal. However, *bernicla*, which breeds west of the Lena River, winters in western Europe, while birds that breed east of the Lena winter around the Sea of Japan (Khishchinskiy and Vronskiy 1979, Boyd 2005). This supports the recognition of *orientalis* for the latter population (e.g. Tugarinov 1941, Ptushenko 1952), which may also be distinct from western North American birds (see Shields 1990, Boyd 2005). Given the location of LB, the 1981 record probably referred to *orientalis*.

Red-breasted Goose *Branta ruficollis*
Endangered. **NEB:** one seen at Davsha on 12 June 1992 (Ananin 1995); one seen at Kudalda Delta on 22–29 September 1994 (E. Kornilov in Ananin 1995). **SD:** one recorded in autumn 1975 at Militseyskaya Channel (Mel'nikov 1997b, 2000a). **Assessment:** Vagrant. **Remarks:** Red-breasted Geese were recorded several times in the Irkutsk area in south-western LB in the mid-nineteenth century (Taczanowski 1877, 1873). Martynov (1990) and Popov (1993e) inexplicably suggested that Red-breasted Goose is a rare migrant in southern LB on its way to and from its wintering grounds in south-eastern China (*sic*), although this species does not winter there at all (e.g. Hunter 2005).

Common Shelduck *Tadorna tadorna*
VAD: recorded at Kichera on 23 May 1991, 16 May 1992 and 21 May 1992 (Pyzh'yanov *et al.* 1997). **NEB:** one recorded on 12 May 1973 at Kudalda Delta (Belyaev 1980, Ananin and Fedorov 1988). **SWB:** two seen north-east of Yelantsy on 31 May 1983 (Pyzh'yanov *et al.* 1997). **SD:** two recorded on 9 May 1947 (Bakutin 1950, 1957); two observed on 12 May 1982 at Posol'skiy Lake and one recorded at Novyy Peremoy Channel on 29 May 1990 (Pyzh'yanov *et al.* 1997). **Assessment:** Rare visitor. **Remarks:** An exceptional instance of breeding has been recently recorded on a salt lake west of Maloye More, Irkutsk Province (Pyzh'yanov 2003a).

Ruddy Shelduck *Tadorna ferruginea*
Pre-1850: appears every year, but in small numbers (Georgi 1775). **NWB:** 5–7 pairs breed on LB shores in the Baykalo-Lenskiy Reserve, north to Zavorotnyy Cape (Popov *et al.* 1998); three individuals and one seen at Tyya Delta on 8 June and 9 June 2005, respectively (Hellström 2005). **NEB:** a pair recorded in 1933, but breeding not confirmed (Gagina 1967). **MM:** breeding recorded in summer 1855 (Radde 1861b); recorded on southern Ol'khon Island in summer 1930 (Shtegman 1936); common breeder on Ol'khon (Litvinov and Gagina 1977), but numbers were decreasing there in 1970s (Litvinov 1980a); common breeder on Ol'khon, but numbers decreased between 1996 and 2001 (Ryabtsev 1998, Pyzh'yanov 2000a, Voroncova 2002); irregular breeder (S. Pyzh'yanov in Anthes *et al.* 2004); breeds at Sharyzhalgay Cape on Ol'khon (Popov 2004b). **SNI:** recorded breeding near Ust'-Barguzin (Turov 1923); recorded in summer 1930 (Shtegman 1936); recorded in summer, but breeding unknown (Gagina 1960a); breeding not recorded in 1961–1962 (Skryabin 1975); 1–2 pairs bred at Kulinoye and at Barmashevyye Lakes in 1974 (A. Koryukin in Belyaev 1980); birds recorded at Kulinoye and near the mouth of Barguzin River in July–August 1991; breeding possible (Heyrovský *et al.* 1992); one seen at Ust'-Barguzin on 15 April 1993 (PS); 1 pair probably bred at Kulinoye in 1993 (JM); two individuals seen at Kovrizhka on 16 July 1994 (JM). **SWB:** recorded in summer 1855 (Radde 1861b); rare visitor at Kultuk (Taczanowski 1873, 1893); does not breed, but migrates; summer records include flocks of 14 at Anga Delta on 24 June 1983 and 28 at Shirety on 18 June 1983 (Bogorodskiy 1989); one recorded in January 1980 at Angara outflow (N. Litvinov in Bogorodskiy 1989); breeds at Krestovskiy Cape (Ryabtsev and Popov 1995) and Peschannaya Bay, Goloustnaya Delta, Kadil'nyy Cape, Bol'shiye Koty and Listvyanka (Popov 2004b), one pair breeding at Kultuk (Durnev *et al.* 1996); 16 pairs between Sharyzhalgay Cape and Ol'khonskiye Vorota strait (Bobrovskiy 1986); one at Kultuk on 8 May 1995 (PS). **SD:** recorded in April 1855 (Maack 1859, Radde 1863); recorded from the 1920s (Bakutin 1950, 1957, Skryabin 1975), but breeding recorded only from the 1960s (Shvetsov and Shvetsova 1967, Shinkarenko 1979, Mel'nikov 1984a, Popov 1997, Pyzh'yanov 2000a, Fefelov *et al.* 2001); local population estimated at 10–12 pairs and 50 non-breeding individuals in early 1980s (Mel'nikov 1984a); common in the northern

part of SD, particularly on the shores of Proval Bay, numbers of adult birds usually up to 25, but 80–100 recorded in 1980 and 1981, when water level low (Mel'nikov 1998b). Ruddy Shelduck arrive in southern LB in late March or early April (Bakutin 1957, Skryabin 1975, Tolchin 1993b) and leave mostly during September, although birds stay there until mid-October (Bakutin 1957, Mel'nikov 1998k, Tolchin 1993b). See also Mel'nikov (1998l). **Assessment:** Widespread but uncommon breeder in southern and central LB (MM, SNI, SD); rare visitor elsewhere. **Remarks:** See also Mel'nikov (1998c, 2000k), Fefelov (1999a).

Eurasian Wigeon *Anas penelope*

VAD: recorded in summer 1855 (Radde 1863); common breeder (Gagina 1954); two nests found on Millionnyy Islet in 1964 (Skryabin 1975); regularly encountered between Nizhneangarsk and Kichera on 4–8 June 1991 (Olsson 1991); common in June 2005 (Hellström 2005). **MM:** recorded on Ol'khon Island on spring migration until early June, and on autumn migration in September (Litvinov and Gagina 1977); irregular breeder and autumn migrant (S. Pyzh'yanov in Anthes *et al.* 2004). **SNI:** breeds at Arangatuy Lake (Turov 1923a); recorded in summer, but no evidence for breeding (Gagina 1960a, Skryabin and Filonov 1962, Skryabin 1975); a flock of nine observed in marshes at Barguzinskiy Bay on 14 July 1991 (Heyrovský *et al.* 1992); recorded at Malyy Arangatuy Lake on 13 July 1994, Kovrizhka on 16 July 1994 and Kopeshka on 3 August 1994, two males seen in the Bol'shoy Chivyrkuy Delta on 16 June 2001, and a male seen at Ust'-Barguzin on 28 June 2001 (all JM). **SWB:** common at Kultuk (Taczanowski 1893); a male collected at Kultuk on 3 October 1913 (Keve 1948); regular migrant at Angara outflow, mean arrival recorded on 21 April (Votintsev 1942); later recorded only as vagrant on 11 May 1979 in Goloustnaya Delta and (undated) at Sharyzhalgay Cape (Bogorodskiy 1989). **SD:** very rare breeder in 1964 (Skryabin 1975), only two nests found in 1976–1977 (Mel'nikova and Klimenko 1979); common spring migrant during mid-April to mid-May; rare autumn migrant (Skryabin 1975, Tolchina *et al.* 1978, Shinkarenko 1979, 1986); breeding population declined in 1980s (Fefelov *et al.* 2001), but numbers of migrants increased since the mid-1980s (Fefelov *et al.* 1999, 2001, see also Pyzh'yanov and Podkovyrov 1999). **Assessment:** Rare breeder and common migrant.

Falcated Duck *Anas falcata*

Near Threatened. **Pre-1850:** recorded annually at most river deltas at LB, but only in small numbers, mostly pairs (Georgi 1775). **NWB:** recorded on a small lake at the Kotel'nikovskiy Cape in summer 1930 (Shtegman 1936); up to three males and a female seen on 4–9 June 2005 at Tyya Delta (Hellström 2005); a male seen at Tyya Delta on 7–8 August 2008 (Bray *et al.* 2008). **VAD:** recorded in summer 1855 (Radde 1861b, 1863); nests found in 1963 (Skryabin 1975); breeds (Tolchina *et al.* 1978). **NEB:** recorded in 1914 and/or 1915 (Doppel'mayr 1926); recorded on spring migration (early May to early June) in 1958–1959 (Skryabin 1975). **MM:** two individuals seen in Sarma Delta in July–August 2002 (Anthes *et al.* 2004). **UI:** recorded on migration (Matveychuk 1991). **SNI:** adult male collected on 19 June 1915 at Kurbulik (Shtegman 1936); breeding recorded at Zmeinaya Bay in the early 1920s (Turov 1923) and at Malyy Chivyrkuy Delta in 1950s (Skryabin and Filonov 1962); recorded on spring migration (late April to late May) in 1961–1962 (Skryabin 1975); flightless young seen on the Svyatoy Nos isthmus in 1961 and/or 1962 (Skryabin 1975); not recorded in 1991, 1994 and 2001 (Heyrovský *et al.* 1992, JM, PS); a male seen in marshes at Kedrovka on 8 June 1993 (MŠ). **SWB:** common on migration at Kultuk, summers there in small numbers, but breeding not proven (Dybowski and Godlewski 1870, Taczanowski 1873, 1893); migrants seen at Angara outflow until late May (Votintsev 1942); at least eight seen at Bol'shaya Rechka on 2 June 1987 (Svensson and Hedgren 1987); a male seen at Bol'shaya Rechka on 2 June 1991 (Olsson 1991). **SD:** common breeder during 1933–1949 (Bakutin 1957); very rare breeder and uncommon migrant in mid-April to mid-May 1964 (Skryabin 1975); only one nest found in 1976–1977 (Mel'nikova and Klimenko 1979); only five birds recorded on spring migration in 1978 and none in 1977 (Shinkarenko 1979); very rare on migration in 1970s–1990s (Mel'nikova and Klimenko 1979, Shinkarenko 1979, 1984a, 1986, Mel'nikov 2000d, Fefelov and Baskakov 2001); a male seen in the southern part of the delta on 16 June 2004 (Haldén 2004); two males seen at Istomino on 29 May 2008 (Holmstedt 2008); flocks of moulting birds recorded from the 1960s (Skryabin 1975, Mel'nikov 2000e), with a maximum of 200 males seen at Chasovenskiye Lakes on 2 July 1992 (I. Tupitsyn in Fefelov *et al.* 2001). **Assessment:** Formerly rare breeder (until the 1970s) and migrant, now a rare visitor only. **Remarks:** Distribution and abundance vary considerably between years (Mel'nikov 2000e). The population has also declined sharply in nearby Yakutia (Degtyarev and Perfil'yev 1998, Degtyarev 2004).

Gadwall *Anas strepera*

Pre-1850: recorded (Georgi 1775). **NWB:** recorded on a small lake at Kotel'nikovskiy Cape in summer 1930 (Shtegman 1936). **VAD:** breeds (Gagina 1954, Fefelov *et al.* 2001); rare breeder and migrant (Skryabin 1975). **NEB:** rare on migration (Ananin and Fedorov 1988). **MM:** breeds (Pyzh'yanov *et al.* 1997, 1998, Fefelov *et al.* 2001); irregular breeder in Sarma Delta (S. Pyzh'yanov in Anthes *et al.* 2004). **SNI:** commonly bred in 1922 (Turov 1923); rare in 1950s (Gagina 1960a); recorded only on spring migration in 1950s (Skryabin and Filonov 1962); a family with ducklings found in 1961 (Skryabin 1975); a male with five female-type birds observed at Monakhovo on 3 July 1991 (D. Heyrovský in Heyrovský *et al.* 1992); three nests found in marshes at Kedrovka on 5–23 June 1993 (JM, MŠ); recorded at Kopeshka on 2 August 1994 (JM); five seen in marshes at Kedrovka on 9 June 1998 (PS); recorded at Barmashevyye Lakes on 13 June 2001 and in the south-eastern corner of Chivyrkuyskiy Bay on 21 June 2001 (both JM). **SD:** rare breeder in 1933–1949 (Bakutin 1957); common breeder in 1964 (Skryabin 1975); rare breeder in 1970s (Mel'nikova and Klimenko 1979); regular, but uncommon breeder in 1980s–1990s (Fefelov *et al.* 1995a,b, 2001); common on migration in mid-April to mid-May (Skryabin 1975, Shinkarenko 1979, 1986). **SWB:** rare at Kultuk (Taczanowski 1893); the only summer record was one seen between Angara outflow and Kadil'nyy Cape on 7–8 May 1982, but regular on

migration (Bogorodskiy 1989). **Assessment:** Widespread, but uncommon breeder; regular migrant.

Baikal Teal *Anas formosa*

Vulnerable. **Pre-1850:** recorded almost every year in southern LB on spring migration (Georgi 1775). **VAD:** breeds (A. Sludskiy in Ptushenko 1952); recorded on autumn migration during 30 August–6 September 1963 (Skryabin 1968). **NEB:** recorded in the Barguzinskiy Reserve on 15 May 1938, 18 May 1954 and 7 May 1956 (Skryabin 1968); not recorded at Tompuda Delta in spring 1958, rare there on 8–22 September 1958 and on 9–21 May 1959, and common there in late August–18 September 1959 (Skryabin 1968, 1975). **SNI:** an adult collected on 6 August 1922 (Turov 1923); common on migration during 30 April–3 June 1961, but only three recorded during spring migration in 1962: two seen at Arangatuy Lake on 11 May, and a male heard there on 12 May (Skryabin and Filonov 1962, Skryabin 1968, 1975); common on migration in late August–29 September 1960, but recorded only on 19 August in 1963 (Skryabin 1968); one recorded on Arangatuy Lake on 27 July 1961, and a pair recorded at Malyy Chivyrkuy Delta on 28 July 1961, but breeding not proven (Skryabin 1968, 1975); not recorded in 1991–1994 or 2001 (JM, PS). **SWB:** recorded at Kultuk on migration (Taczanowski 1873, 1893); regular migrant at the Angara outflow (Votintsev 1947). **SD:** common on spring migration in 1930s–1940s (Bakutin 1957); rare on spring migration during 12–17 May 1964 (Skryabin 1968, 1975); rare on autumn migration in 1930s–1960s (Bakutin 1957, Skryabin 1975); very rare on migration in 1970s–1990s (Mel'nikova and Klimenko 1979, Shinkarenko 1986, Podkovyrov and Shinkarenko 1986, Fefelov *et al.* 2001, Fefelov and Baskakov 2001); a flock of six seen on 9 May 1984 (A. Dvoryadkin in Fefelov and Baskakov 2001). **Note:** Recorded on migration in 1850s (Radde 1863). Variation in numbers recorded may partly result from the fact that the species migrates at night and is not faithful to particular stopover sites (Skryabin 1968, 1975). **Assessment:** Formerly a common migrant, but recorded only as a vagrant since 1970s (see also Votintsev 1947, Mel'nikov 1993b). Sludskiy's (in Ptushenko 1952) assurance that the species breeds in VAD is unsupported and may have been based on summer records of non-breeding individuals. **Remarks:** The population has also declined since the 1960s in adjacent Irkutsk Province (Mel'nikov 1993b) and Yakutia (Shugayev and Pozdnyakov 1979, Degtyarev and Perfil'yev 1998, Degtyarev 2004), but the reasons remain unclear (see also Isakov 1952, Collar *et al.* 2001).

Common Teal *Anas crecca*

Pre-1850: recorded (Georgi 1775). **NWB:** seen at Tyya Delta on 8–9 June 2005 (Hellström 2005). **VAD:** recorded in summer 1855 (Radde 1861b); common breeder (Skryabin 1975); regularly encountered between Nizhneangarsk and Kichera on 4–7 June 1991 (Olsson 1991); seen at Verkhnyaya Zaimka on 6 June (Hellström 2005). **NEB:** recorded in 1914 and/or 1915 (Doppel'mayr 1926). **MM:** recorded only on migration at Ol'khon Island (Litvinov and Gagina 1977); regular breeder in Sarma Delta (S. Pyzh'yanov in Anthes *et al.* 2004). **UI:** recorded on migration (Matveychuk 1991). **SNI:** common breeder (Gagina 1960a, Skryabin 1975); common in 1991 (Heyrovský *et al.* 1992), 1993 and 1994 (JM); recorded at Barmashevyye Lakes on 13 June 2001 and a flock of five males recorded in the south-eastern corner of Chivyrkuyskiy Bay on 21 June 2001 (both JM). **SWB:** common at Kultuk (Taczanowski 1893); two females collected on 18 September 1913 (Keve 1948); said to be common breeder and common on migration, but no data presented (Bogorodskiy 1989). **SD:** common breeder (Bakutin 1957, Shvetsov and Shvetsova 1967); uncommon breeder (Skryabin 1975, see Fefelov *et al.* 2001); irregular breeder from 1970s, with breeding records only in 1974–1976 (Mel'nikova and Klimenko 1979), 1979, 1981 and 1995 (Mel'nikov 1984a, Fefelov *et al.* 2001); common on spring and autumn migration since 1920s, usually mid-April to mid-May and mid-September to late October (Bakutin 1957, Skryabin 1975, Tolchina *et al.* 1978, Shinkarenko 1979, 1986, Fefelov *et al.* 2001). **Assessment:** Rare breeder and common migrant.

Mallard *Anas platyrhynchos*

NWB: bred in small numbers at a small lake at Kotel'nikovskiy Cape in summer 1930 (Shtegman 1930). **VAD:** recorded in summer 1855 (Radde 1861b); common breeder during late April to mid-October (Skryabin 1975, Tolchina 1979, Fefelov *et al.* 2001). **NEB:** recorded in 1914 and/or 1915 (Doppel'mayr 1926). **MM:** uncommon breeder, rare on Ol'khon Island (Litvinov and Gagina 1977); regular breeder (S. Pyzh'yanov in Anthes *et al.* 2004). **UI:** breeding recorded (Matveychuk 1991). **SNI:** common breeder (Gagina 1960a, Skryabin and Filonov 1962); common in summer 1991 (Heyrovský *et al.* 1992), 1993 and 1994 (JM, PS); several pairs recorded at Bol'shaya Cheremshana Delta on 13–15 June 1998 (PS); common in summer 2001 (JM, PS); a female with ducklings seen at Ust'-Barguzin on 13 July 2005 (JM); common on migration during mid- to late April and mid-September to mid-October (Skryabin 1975). **SWB:** common at Kultuk (Taczanowski 1893); common in marshes at Kultuk on 8–9 May 1995 (PS); common breeder (Bogorodskiy 1989). **SD:** recorded in April 1855 (Maack 1859); common breeder and migrant from early to late April and from mid-September to late October (Bakutin 1957, Shvetsov and Shvetsova 1967, Skryabin 1975, Mel'nikova and Klimenko 1979, Tolchina 1979, Shinkarenko 1979, 1984a, Mel'nikova 1983, Mel'nikov 1990c, Fefelov *et al.* 2001). **Note:** See also Skryabin (1967c). **Assessment:** Common breeder and migrant.

Spot-billed Duck *Anas poecilorhyncha*

VAD: recorded on migration from 1957 (Skryabin 1975); breeding probable (Skryabin 1975); breeds (Sadkov and Safronov 1984). **NEB:** an undated specimen from Davsha Delta was found in the Barguzinskiy Reserve collection at Davsha (Gagina 1960b); a pair observed on 13 May 1958 in Tompuda Delta (Skryabin 1960). **MM:** recorded breeding sometime during 1977–1994 (Pyzh'yanov *et al.* 1997). **SNI:** two nests found on northern and eastern shores of Arangatuy Lake in 1961 (Skryabin and Filonov 1962, Skryabin 1963, 1965a); recorded on spring and autumn migration in 1961 (Skryabin and Filonov 1962, Skryabin 1965a); not recorded in 1991–1994 and 2001 (Heyrovský *et al.* 1992, JM, PS). **SWB:** several individuals seen on the Angara shore between Bol'shaya Rechka and Slyudyanka on 17 July 1979 (JMa). **SD:** rare on migration since 1935 (Bakutin 1957); first breeding recorded in

1964, when ten nests were found (Skryabin 1975); subsequently a regular, but rare, breeder and migrant between late April and mid-May in spring, and up to mid-October in autumn (Bakutin 1957, Skryabin 1975, Mel'nikova and Klimenko 1979, Mel'nikov 1984a, 1998b, Shinkarenko 1986, Fefelov *et al.* 2001, Fefelov and Baskakov 2001). Holmstedt (2008) recorded a male Spot-billed Duck × Mallard hybrid on 29 May 2008 at Istomino. **SEB:** three nests and four families with small ducklings found in 1972–1976 at Mishikha Delta (Vasil'chenko 1987). **Note:** Birds arrive in spring during late April–mid-May, with the last individuals recorded in late September (Skryabin 1975). **Assessment:** Has spread west in East Siberia during the twentieth century, reaching LB as a breeder in 1950s (Skryabin 1963, 1965a, 1975). Fefelov *et al.* (2001) gave no trends in numbers at LB, but Adamtsevich (1975) described its overall decline at LB, which is supported by our data from SNI (JM, PS). I. Fefelov (*in litt.* 2008) confirmed that the species is declining at LB. **Remarks:** LB represents the western extent of the range of Spot-billed Duck: although there are several summer records of this species west of LB from twentieth century (Mel'nikov 1993c), no proof of breeding further west has been obtained (Sum'yaa and Skryabin 1989). **Taxonomy:** Given the location of LB, birds probably belong to the subspecies *zonorhyncha*, which is now sometimes separated at the species level (e.g. Johnson and Sorenson 1999, Kulikova *et al.* 2004, 2005, Leader 2006, Brazil 2009).

Northern Pintail *Anas acuta*

Pre-1850: recorded (Georgi 1775). **NWB:** breeding recorded at Kotel'nikovskiy Cape on 13–14 August 1930 (Shtegman 1936). **VAD:** recorded in summer 1855 (Radde 1861b); common breeder (Gagina 1954, Skryabin 1975, Sadkov and Safronov 1984); recorded at Nizhneangarsk in June 2005 (Hellström 2005). **NEB:** recorded in late August and early September (Turov 1924a); rare breeder (Ananin and Fedorov 1988). **MM:** recorded in summer and autumn (Litvinov and Gagina 1977); breeds (Pyzh'yanov *et al.* 1997); irregular breeder and common migrant in Sarma Delta (S. Pyzh'yanov in Anthes *et al.* 2004). **UI:** recorded on migration (Matveychuk 1991). **SNI:** common breeder and migrant during late April to late May and early September to early October (Gagina 1960a, Skryabin and Filonov 1962, Skryabin 1975, Heyrovský *et al.* 1992); recorded north of Barmashevyye Lakes on 16–17 June 1994 (JM, PS); a male recorded at Ust'-Barguzin on 28 June 2001 (JM). **SWB:** common at Kultuk (Taczanowski 1893); recorded on spring migration (Votintsev 1942). **SD:** rare breeder, 1933–1949 (Bakutin 1957); common breeder and migrant in 1960s–1990s; spring migration lasted from mid-April to early May, with the last birds departing in late October (Skryabin 1975, Tolchina *et al.* 1978, Mel'nikova and Klimenko 1979, Shinkarenko 1979, 1986, Fefelov *et al.* 1999, 2001). The local population was estimated at 1,500 pairs in the mid-1970s, and at 10,000 pairs in the early 1990s (Fefelov *et al.* 1999a). **Assessment:** Common breeder and migrant.

Garganey *Anas querquedula*

Pre-1850: recorded (Georgi 1775). **VAD:** common breeder (Gagina 1954, Sadkov and Safronov 1984); recorded at Yarki Island in June 2005 (Hellström 2005). **NEB:** recorded in 1914 and/or 1915 (Doppel'mayr 1926); uncommon at Tompuda Delta on spring migration in 1958–1959 (Skryabin 1975). **MM:** breeding recorded in Sarma Delta (Skryabin 1975); rare visitor in Sarma Delta in July–August 2002–2003 (Anthes *et al.* 2004). **SNI:** common breeder (Gagina 1960a, Skryabin and Filonov 1962, Skryabin 1975); only single birds seen in summer 1991 (Heyrovský *et al.* 1992); recorded at Ust'-Barguzin on 3 June 1993, north of Barmashevyye Lakes on 16 June 1994, and a male seen in the south-eastern corner of Chivyrkuyskiy Bay on 21 June 2001 (all JM). **SWB:** breeding recorded between Kultuk and Slyudyanka (Dybowski and Godlewski 1870); common at Kultuk (Taczanowski 1893); breeding recorded at Goloustnaya Delta (Skryabin 1975) and at Angara outflow (Bogorodskiy 1989); also known on migration (Bogorodskiy 1989). **SD:** rare breeder in 1930s–1970s (Bakutin 1957, Skrabin 1975, Tolchina *et al.* 1978, Mel'nikova and Klimenko 1979); common breeder in 1980–1990s (Fefelov *et al.* 2001); common on migration between mid-April and mid-May (Skryabin 1975, Tolchina *et al.* 1978, Shinkarenko 1979, Fefelov *et al.* 2001); large assemblages of moulting males recorded in 1976–1977 (Mel'nikova and Klimenko 1979). **Assessment:** Common breeder and migrant.

Northern Shoveler *Anas clypeata*

Pre-1850: widespread (Georgi 1775). **NWB:** one recorded at Kotel'nikovskiy Cape in summer 1930 (Shtegman 1936). **VAD:** a moulting female collected on 1 August 1913 (Keve 1948); common breeder and migrant (Gagina 1954, Skryabin 1975, Sadkov and Safronov 1984). **NEB:** recorded in 1914 and/or 1915 (Doppel'mayr 1926); uncommon at Tompuda Delta on spring migration during mid–late May in 1958–1959 (Skryabin 1975). **MM:** rare migrant on Ol'khon Island (Litvinov and Gagina 1977); recorded breeding in Sarma Delta (Bogorodskiy 1989); breeds in southern part of MM (Pyzh'yanov *et al.* 1997, 1998); regular breeder and common migrant in Sarma Delta (S. Pyzh'yanov in Anthes *et al.* 2004). **SNI:** not recorded in early 1920s (Turov 1923) or in 1930 (Shtegman 1936); breeding recorded from 1950s (Gagina 1960a, Skryabin and Filonov 1962, Skryabin 1975, Heyrovský *et al.* 1992); recorded north of Barmashevyye Lakes on 16 June 1994 and at Kopeshka on 3 August 1994 (both JM). **SWB:** rare at Kultuk (Taczanowski 1893); a pair seen in marshes at Kultuk on 9 May 1995 (PS); recorded on spring migration at the Angara River (Votintsev 1942); recorded breeding at Goloustnaya Delta (Bogorodskiy 1989); recorded on spring migration (Bogorodskiy 1989). **SD:** uncommon breeder in 1930s–1940s (Bakutin 1950, 1957); common breeder and migrant in 1964 (Skryabin 1975); common breeder and common migrant in 1970s–1990s, with spring migration from mid-April to early May (Tolchina *et al.* 1978, Shinkarenko 1979, 1983, Mel'nikova and Klimenko 1979, Fefelov *et al.* 2001). **Assessment:** Common breeder and migrant.

Red-crested Pochard *Rhodonessa rufina*

SWB: a pair observed at Bol'shaya Rechka on 2 June 1987 (Svensson and Hedgren 1987). **Assessment:** Vagrant. **Remarks:** Also recorded south of LB at Khubsugul, Mongolia (Sum'yaa and Skryabin 1989: 40). **Taxonomy:** Usually listed as *Netta rufina* in Russian

literature. Collar *et al.* (2001: 500) give reasons for rejecting *Rhodonessa* for this species.

Common Pochard *Aythya ferina*
Pre-1850: widespread and common (Georgi 1775). **NWB:** several seen in late June 1930 at Baykal'skoye (Shtegman 1936). **VAD:** breeds, with chicks found in July 1855 (Radde 1861b, 1863); regularly encountered between Nizhneangarsk and Kichera on 4–7 June 1991 (Olsson 1991); c.75 individuals seen at Yarki Island in June 2005 (Hellström 2005). **NEB:** rare migrant in Barguzinskiy Reserve, and does not breed there (Belyaev 1980). **MM:** uncommon spring migrant, non-breeding individuals recorded in summer, and rare autumn migrant (Pyzh'yanov and Sonin 1979); two recorded in Sarma Delta in August 2003 (Anthes *et al.* 2004). **UI:** one recorded at Bol'shoy Ushkan'i Island on 21 June 1975 (Yumov 1990); recorded on migration (Matveychuk 1991). **SWB:** rare on migration at Kultuk (Taczanowski 1893). **SNI:** several pairs recorded in mid-July 1930 near Ust'-Barguzin (Shtegman 1936); common breeder on isthmus and in Chivyrkuyskiy Bay (Skryabin and Filonov 1962, Skryabin 1975, Heyrovský *et al.* 1992, JM in 1993 and 1994); recorded north of Barmashevyye Lakes on 16 June 1994 (JM). **SD:** common breeder and migrant, with spring migration between mid-April and late May (Skryabin 1975, Tolchina *et al.* 1978, Mel'nikova and Klimenko 1979, Shinkarenko 1979, Fefelov *et al.* 2001). **Assessment:** Common breeder and migrant.

Tufted Duck *Aythya fuligula*
Pre-1850: very common (Georgi 1775). **NWB:** common on small lakes between Kotel'nikovskiy Cape and Baykal'skoe, families with small ducklings recorded on 7–8 August 1930 (Shtegman 1936). **VAD:** common breeder (Skryabin 1975); regularly encountered between Nizhneangarsk and Kichera on 4–7 June 1991 (Olsson 1991); common at Yarki Island in June 2005 (Hellström 2005). **NEB:** recorded at Tompuda Delta on migration during 21 May–7 June 1958 and 6 May–6 June 1959 (Skryabin 1975). **MM:** common breeder on Bol'shoy Toynak, Malyy Toynak and Khunuk Islands and in the Sarma Delta (Pyzh'yanov and Sonin 1979, Pyzh'yanov *et al.* 1998); common on spring and autumn migration (Pyzh'yanov and Sonin 1979); rare breeder on Ol'khon Island (Litvinov and Gagina 1977); regular breeder and common migrant in Sarma Delta (S. Pyzh'yanov in Anthes *et al.* 2004). **UI:** recorded on migration (Matveychuk 1991). **SNI:** common breeder on the isthmus, but does not breed in Chivyrujskiy Bay (Gusev 1960b, Skryabin and Filonov 1962, Skryabin 1975); uncommon breeder in 1991 (Heyrovský *et al.* 1992); recorded at Monakhovo on 28 June 1993, north of Barmashevyye Lakes on 16 June 1994, and common on Malyy Arangatuy Lake on 13–14 July 1994 (all JM); recorded at Barmashevyye lakes on 10 June 1998 (PS) and on 13 June 2001 (JM); common in the Bol'shoy Chivyrkuy Delta on 16–19 June 2001, but no breeding evidence (JM, PS). **SWB:** widespread at Kultuk (Taczanowski 1893); a female collected on 29 September 1913 (Keve 1948); recorded breeding in Goloustnaya, Anga and Sarma Deltas in 1960s (Skryabin 1975), but breeding restricted to the Goloustnaya Delta in 1979 (Bogorodskiy 1989); recorded wintering on the Angara outflow in 1930s–1950s (Tret'yakov 1940, Gagina 1958a, Pastukhov 1965), but not recorded there 1964–1965 (Skryabin 1975) or 1976–1979 (Bogorodskiy 1989). **SD:** common breeder and migrant during mid-April to late May and late September to late October (Bakutin 1957, Skryabin 1975, Tolchina *et al.* 1978, Mel'nikova and Klimenko 1979, Shinkarenko 1979, 1986, Podkovyrov 1997, Fefelov *et al.* 2001). **Assessment:** Common breeder and migrant.

Greater Scaup *Aythya marila*
Pre-1850: common at LB (Georgi 1775). **VAD:** recorded on migration (Gagina 1954). **SWB:** rare in winter at the Angara outflow (Gagina 1950a). **SD:** two shot on 18 September 1998 at Khaustik Islet (Mel'nikov 2000a); a male seen between Galutay and Militseyskaya channels on 3 June 2002 (Fefelov *et al.* 2003). **Assessment:** Vagrant. **Remarks:** Bogorodskiy (1989) casted doubt on the observations by Gagina (1958a). Also Georgi's (1775) assurance that Greater Scaup is common at LB was probably based on misidentification of Tufted Duck.

Harlequin Duck *Histrionicus histrionicus*
Pre-1850: 'huge flocks' around Ol'khon Island, small flocks elsewhere in summer 1772 (Georgi 1775). **NWB:** recorded on LB shore within Baykalo-Lenskiy Reserve on 5 June 1990 (N. Skryabin in Olovyannikova 2002). **NEB:** one collected at Shumilikha Delta on 12 September 1957 and four seen at LB near the Davsha estuary on 9 September 1961 (Skryabin 1975); one recorded on 21 June 1989 at Khamankit Cape (Pyzh'yanov *et al.* 1997). **MM:** possible breeding recorded on the Sarma, c.10 km from its delta, in 1990–1991 (Pyzh'yanov *et al.* 1997, 1998). **SNI:** two recorded on Arangatuy Lake on 24 May 1962 (Skryabin 1975); not recorded in 1991–1994 or 2001 (JM, PS). **SWB:** recorded betweeen Kultuk and Angara outflow in 1855 (Radde 1863); recorded at Kultuk on migration (Dybowski and Godlewski 1870, Taczanowski 1893); recorded wintering on Angara outflow in 1930s (Tret'yakov 1940); no recent data for SWB (Bogorodskiy 1989). **SD:** a family of ducklings recorded in the upper reaches of the Abramikha, c.15 km from its opening into Posol'skiy Lake, on 17 August 1947 (Bakutin 1957); no other data (Fefelov *et al.* 2001). **Assessment:** Formerly regular migrant, winter and summer visitor, but vagrant since c.1950s. Records from the upper reaches of the Sarma and Abramikha Rivers are listed above because they are close to LB, but both refer to mountain habitats and cannot be regarded as proof of breeding at LB proper. **Remarks:** Harlequin Duck still occurs on mountain rivers to the north-west (in Baykalo-Lenskiy Reserve, breeding confirmed: Unzhakov 1988, Olovyannikova 2000a, 2002) and north-east (upper reaches of the Barguzin River in Dzherginskiy Reserve, breeding not confirmed: JM in June 1994).

Long-tailed Duck *Clangula hyemalis*
NWB: a male seen at Tyya Delta on 9 June 2005 (Hellström 2005). **VAD:** recorded on autumn migration in northern LB (Shtegman 1936); a flock of 16 birds seen on 9 October 1996 (Pyzh'yanov *et al.* 1997, 1998); six recorded on Yarki Island on 6 June 1991 (Olsson 1991). **MM:** a male seen in northern part on 16 June 1989 (Pyzh'yanov *et al.* 1997, 1998); rarely recorded at Kocherikova (Unzhakov 1988). **SWB:** common in winter on Angara outflow (Radde 1863); recorded wintering there in c.1930 (Shtegman 1936), 1963 (a flock of eight:

Skryabin 1975), 1972–1973 (three seen repeatedly at Shamanskiy Kamen': Mel'nikov *et al.* 1998), March 1976 (Vasil'chenko 1987), the late 1970s (several singles: S. Matveychuk in Mel'nikov *et al.* 1998), and regularly in October–March 1984–1991, including 25 individuals in two flocks in the very harsh winter of 1987–1988 (Mel'nikov *et al.* 1998); three seen at Listvyanka on 17 and 19 June 1986 (Larsson 1986); five seen in December 1989 (Pyzh'yanov *et al.* 1987); a few dozen individuals wintering at the Angara outflow during mid-2000s, but over 100 in winter 2007–2008 (I. Fefelov *in litt.* 2008). **SD:** flock of five recorded on 12 October 1983 at Pershikha Channel (Mel'nikov *et al.* 1998, Mel'nikov 2000a); a juvenile collected on 20 October 1991 at Galutay Channel (Tupitsyn and Fefelov 1995a). **SEB:** a juvenile female recorded on 16 October 1973 at Vydrinaya Delta (Vasil'chenko 1987). **Assessment:** Rare migrant and winter visitor.

White-winged Scoter *Melanitta fusca*

Pre-1850: common (Georgi 1775). **NWB:** families with small ducklings recorded in mid-August 1930 between Kotel'nikovskiy Cape and Baykal'skoye (Shtegman 1936); a female with 14 ducklings recorded on 5 August 1959 on a small lake at Malyy Solontsovyy Cape, and families recorded at Bol'shaya Kosa Cape and Zavorotnyy Cape in 1959 (Gusev 1962); 45 seen at Tyya Delta on 9 June 2005 (Hellström 2005); flocks seen at Tyya Delta on 6–10 June 2008 (Bray *et al.* 2008). **VAD:** recorded in summer, common on migration, breeding possible (Pyzh'yanov *et al.* 1998); regularly encountered between Nizhneangarsk and Kichera on 4–8 June 1991, 100 individuals at Yarki Island on 6 June 1991 (Olsson 1991). **MM:** uncommon breeder, especially in the southern part including islets in Sarma Delta, at Onguren, and once north of Borgadagan Island (Malyshev 1960a, Gusev 1962, Pyzh'yanov and Sonin 1979, Pyzh'yanov *et al.* 1997, 1998); regular breeder and common migrant in Sarma Delta (S. Pyzh'yanov in Anthes *et al.* 2004); rare on Ol'khon Island, where small flocks recorded at the southern end in late July 1930 (Shtegman 1936) and one seen in 1973 (Litvinov and Gagina 1977). **UI:** common summer visitor, but no evidence for breeding (Yumov 1990, Matveychuk 1991). **SNI:** several families with ducklings recorded on small lakes near Ust'-Barguzin in summer 1930 (Shtegman 1936); recorded in 1988 (Yumov 1990); breeding not recorded in SNI during 1991–1994 or 2001 (Heyrovský *et al.* 1992, JM, PS), but large flocks (up to 120 birds) were repeatedly seen flying high above Svyatoy Nos isthmus on 30 June–28 July 1991 (Heyrovský *et al.* 1992); a flock of eight seen flying over Kedrovka on 24 June 1993 (JM); a male seen on 18 June 1994 on Barmashevyye Lakes (PS); a flock of c.70–80 seen flying at Kedrovka on 26 June 1993 and a flock of c.100 seen at Kedrovka on 19 July 1993 (JM); a flock of c.40 seen on 12 June 1998 at Zmeinaya Bay and c.50 seen on 15 July 2001 at Ust'-Barguzin (PS). **SWB:** recorded at Kultuk on migration (Dybowski and Godlewski 1870, Taczanowski 1893); rare on migration at shores in late May (Vasil'chenko 1982, Bogorodskiy 1989). **SD:** rare breeder, first confirmed in 1977, with only 13 nests found during 1977–1996, mainly on Karga Bab'ya Islet and at Posol'skiy Lake (Pyzh'yanov *et al.* 1997, 1998, Fefelov *et al.* 2001); uncommon on spring migration, very rare on autumn migration (Bakutin 1957, Skryabin 1975, Fefelov *et al.* 2001); occasionally small flocks of non-breeding individuals oversummer (Mel'nikov 2000a, Fefelov *et al.* 2001); 73 counted at Alimasovo on 4 June 2008 (Hellström 2008). **SEB:** recorded on migration (Vasil'chenko 1982, 1987); a flock of 1,200 males seen at LB near Maksimikha on 28 June 2004 (Haldén 2004). **Assessment:** Widespread but uncommon breeder, and common migrant (see also Vasil'chenko and Prokop'yev 1988c). **Taxonomy:** White-winged Scoters breeding at LB belong to the Siberian form *stejnegeri* (Ptushenko 1952, Fefelov *et al.* 2001), which is now usually treated as a subspecies of *M. deglandi* (see Collar 2003 and Collinson *et al.* 2006 for reviews) and often referred to as such in Russian literature.

Common Goldeneye *Bucephala clangula*

NWB: a family with ducklings was recorded on a small mountain lake between Kotel'nikovskiy Cape and Baykal'skoe (i.e. not directly at LB), in August 1930 (Shtegman 1936); breeds (Malyshev 1960a). **VAD:** recorded in summer 1855 (Radde 1861b); breeds (Gagina 1954, Skryabin 1975); regularly encountered between Nizhneangarsk and Kichera on 4–8 June 1991 (Olsson 1991); c.135 counted on 5 June 2005 north of Yarki Island (Hellström 2005). **NEB:** recorded in 1914 and/or 1915 (Doppel'mayr 1926); breeds (Ananin and Fedorov 1988). **MM:** no distinct spring migration; flocks of moulting males appear from early June (usually 400–600 individuals per flock, once 1,000 individuals in a flock) and disperse in late June to early July; autumn migration occurs from late August to early September (Pyzh'yanov and Sonin 1979); common on autumn migration at Ol'khon Island, where breeding considered possible but not proven (Litvinov and Gagina 1977); regular breeder in Sarma Delta (S. Pyzh'yanov in Anthes *et al.* 2004). **UI:** ducklings found on Bol'shoy Ushkan'i Island on 27 June 1957 (Gusev 1960a); said to be uncommon breeder on Dolgiy Island (Matveychuk 1991). **SNI:** occasional summer records on LB coastlines (Gagina 1960a); recorded (Skryabin 1975); common breeder in 1991 (Heyrovský *et al.* 1992); a female seen at Kedrovka on 12 June 1993 (JM); five males seen on 18 June 1994 on Barmashevyye Lakes (PS); a flock of c.50–60 individuals, mainly males, seen in Zmeinaya Bay on 14–15 June 2001 (JM); non-breeding individuals seen in the Bol'shoy Chivyrkuy Delta on 16–19 June 2001 (JM, PS). **SWB:** common at Kultuk (Taczanowski 1893); a female collected on 9 October 1913 (Keve 1948); a male seen at Kultuk on 9 May 1995 (PS); a male collected at Baykal on 20 January 1913 (Keve 1948); common on migration during 9 April–early May (including a flock of many males recorded on 23–25 June 1983) and late August or early September to late October or early November (Bogorodskiy 1989); commonly winters on Angara outflow: up to 130,000 individuals (Pastukhov 1965); 4,000–5,000 (Skryabin 1975); 4,000 in 1975–1976 (Vasil'chenko 1987); 1,000–5,000 in 1975–1980 (Bogorodskiy 1989), and 11,000–18,000 in 1980s–1990s (Mel'nikov 2000f); 250 seen on Angara outflow on 14 June 1988 (SOF 1988); 100 seen at Bol'shaya Rechka on 7 June 1989 (SOF 1989); 65 seen at Listvyanka on 2 June 1991 (Olsson 1991). **SD:** common breeder (Shvetsov and Shvetsova 1967); common on spring migration 17 April–24 April in 1977–1978 (Shinkarenko 1979) and generally between early April–early May (Fefelov *et al.*

2001); autumn migration starts on 5–15 September, with large numbers migrating from late September to mid-October (Fefelov *et al.* 2001); non-breeding and moulting individuals common in summer (Fefelov *et al.* 2001); a few recorded in winter 1981 at Kabansk by local inhabitants (Fefelov *et al.* 2001). **Assessment:** Rare breeder in central and northern LB; common migrant everywhere; regularly winters at Angara outflow. **Remarks:** The assurance by Shvetsov and Shvetsova (1967) that Common Goldeneye commonly breeds in SD was probably based on the observation of summer individuals, because no confirmed breeding records were obtained for SD either earlier (Bakutin 1950, 1957) or later (Fefelov *et al.* 2001). Common Goldeneye is a widespread and rather common breeder in the mountains surrounding LB.

Smew *Mergellus albellus*

Pre-1850: common in southern LB (Georgi 1775). **VAD:** three families observed in late July 1963 (Skryabin 1975, Sadkov 1991); regularly encountered between Nizhneangarsk and Kichera on 4–7 June 1991 (Olsson 1991); two females seen on 5 June 2005 north of Yarki Island (Hellström 2005). **NEB:** recorded at Tompuda estuary on migration in spring 1958 and 1959 (Skryabin 1975). **MM:** two individuals recorded on 30 June 1977 and five on 12–13 May 1978 in Sarma Delta (Pyzh'yanov and Sonin 1979, Pyzh'yanov *et al.* 1979); one recorded in Sarma Delta in July–August 2002 (Anthes *et al.* 2004). **UI:** rare on spring and autumn migration (Yumov 1990, Matveychuk 1991). **SNI:** common on migration, summer records indicating that breeding is possible (Skryabin and Filonov 1962); a flightless duckling recorded at Malyy Chivyrkuy Delta on 23 July 1960 (Skryabin 1975); breeding recorded in late 1970s (Yegorov 1980), and at Kedrovka in 1991 (Heyrovský *et al.* 1992) and 1993 (JM); recorded north of Barmashevyye Lakes on 16 June 1994 (JM); two males seen on 9 June 1998 at Kedrovka (PS). **SWB:** breeds at Kultuk (Dybowski and Godlewski 1870, Taczanowski 1873); recorded on autumn migration in the Goloustnaya Delta (Bogorodskiy 1989); rarely recorded in winter on the Angara outflow (Gagina 1958a, Mel'nikov and Shcherbakov 1990). **SD:** regular but uncommon on spring migration in late April–mid-May (Skryabin 1975, Shinkarenko 1979, Fefelov *et al.* 2001) and on autumn migration in late October–late November (Fefelov *et al.* 2001); four families recorded at Severnaya Channel in summer 1981 and breeding confirmed there and at Yepishkinaya Channel in subsequent years (Mel'nikov 1984a, 1998b, 2001a). **Assessment:** Regular migrant and rare breeder (from 1960s). **Remarks:** Spread south through the LB area in the second half of the twentieth century, reaching SNI in 1960s (see also Gusev 1965 for a breeding record at Kurumkan in the Barguzinskaya Valley) and SD in 1980s. In 1990s started to breed south of LB in Buryatia (Mel'nikov 2001a) and Tuva (Kartashov 2000).

Red-breasted Merganser *Mergus serrator*

Pre-1850: large flocks in Chivyrkuyskiy Bay in summer 1772 (Georgi 1775). **NWB:** breeds on LB shores (Popov 2004b); flocks seen at Tyya Delta on 6–8 June 2008 (Bray *et al.* 2008). **VAD:** regularly seen between Nizhneangarsk and Kichera on 4–7 June 1991 (Olsson 1991); recorded at Nizhneangarsk in June 2005 (Hellström 2005). **NEB:** breeds on LB shores (Ananin and Fedorov 1988). **MM:** breeds in Ust'-Anginskiy Bay (Skryabin 1975); common breeder, but breeding on Ol'khon Island not recorded (Litvinov and Gagina 1977); common breeder, particularly in the south on Malyy and Bol'shoy Toynak Islands, at Khubyn Island and at the southern corner of Ol'khon (Pyzh'yanov and Sonin 1979, Pyzh'yanov *et al.* 1998); migration recorded 24 April–8 May and late August–mid-October (Pyzh'yanov and Sonin 1979); regular breeder and common migrant in Sarma Delta (S. Pyzh'yanov in Anthes *et al.* 2004). **UI:** several singles and a flock of 60–70 seen near Bol'shoy Ushkan'y Island on 26–28 June 1957 (Gusev 1960a); common breeder on Dolgoy Island, common summer visitor (Skryabin 1975, Yumov 1990, Matveychuk 1991). **SNI:** recorded breeding along all shores of Chivyrkuyskiy Bay (Turov 1923a); rare breeder on north-western shores of Chivyrkuyskiy Bay (Yegorov 1980); common migrant on Chivyrkuyskiy Bay (Skryabin and Filonov 1962, Skryabin 1975, Yegorov 1980); regularly seen along rocky coasts of Barguzinskiy Bay and Chivyrkuyskiy Bay in summer 1991 (Heyrovský *et al.* 1992) and in July–August 1993 (JM); two seen flying over Kedrovka on 24 June 1993 (JM); five seen on 9 June 1998 at Kedrovka and a pair seen on 13–15 June 1998 at Bol'shoy Chivyrkuy Delta (PS); a pair and four males seen in the Bol'shoy Chivyrkuy Delta on 16 June 2001 (JM). **SWB:** recorded on migration on 2–8 May 1982 at Kadil'nyy Cape (Bogorodskiy 1989); said to breed along LB shores (Popov 2004b); formerly wintered on Angara outflow (Tret'yakov 1940, Tarasov 1952, Gagina 1958a), but not in later years (Skryabin 1975, Bogorodskiy 1989, Mel'nikov and Shcherbakov 1990); 30 recorded at Bol'shaya Rechka on 6–7 June 1989 (SOF 1989); 15 seen at Bol'shaya Rechka on 2 June 1991 (Olsson 1991); recorded at Bol'shaya Goloustnaya Delta in June 2005 (Hellström 2005); started to winter at Angara outflow in the 2000s, up to a few dozen birds recorded (I. Fefelov *in litt.* 2008). **SD:** uncommon on spring migration during late April–mid-May (Bakutin 1957, Skryabin 1975) and on autumn migration until mid-November (Skryabin 1975); breeding recorded (one nest with nine eggs found on 25 June 1993 on Karga Bab'ya Islet: Pyzh'yanov *et al.* 1997, 1998, Fefelov *et al.* 2001). **SWB:** widespread at Kultuk in flocks in autumn (Taczanowski 1873, 1893); seen on 11 March 1920 on ice-free Angara (Musílek 2007); started to winter again on the Angara outflow in the 2000s, when up to a few dozen individuals were recorded (I. Fefelov *in litt.* 2008). **SEB:** peak of spring migration in Baykal'skiy Reserve recorded on 10–15 May (Vasil'chenko and Vasil'chenko 1976). **Assessment:** Common breeder and migrant.

Common Merganser *Mergus merganser*

Pre-1850: common (Georgi 1775). **NWB:** seen on several occasions between Kotel'nikovskiy Cape and Baykal'skoye (Shtegman 1936); c.10 seen at Tyya Delta on 6 June 1991 (Olsson 1991); recorded at Tyya Delta in June 2005 (Hellström 2005). **VAD:** breeds (Gagina 1954). **MM:** common on migration during late April–early July and late August–late September or early October (Pyzh'yanov and Sonin 1979, Pyzh'yanov *et al.* 1979); irregular breeder and common migrant in Sarma Delta (S. Pyzh'yanov in Anthes *et al.* 2004). **UI:** common summer visitor (Yumov 1990, Matveychuk 1991). **SNI:** a nest found on Baklaniy Islet (Gusev 1960b); more than 100 moulting birds

observed at Irkana Bay (Yegorov 1980); not recorded in 1991 (Heyrovský *et al.* 1992); recorded in Chivyrkuyskiy Bay on 12–13 July 1993 (JM); eight seen on 9 September 1994 in Barguzinskiy Bay near Kedrovka (PS). **SWB:** Recorded on Angara outflow in winter in 1850s (Radde 1863); recorded breeding and in autumn flocks at Kultuk (Dybowski and Godlewski 1870, Taczanowski 1873); recorded on migration at Goloustnaya Delta (Bogorodskiy 1989); four seen at Bol'shaya Rechka on 7 June 1989 (SOF 1989); recorded at Bol'shaya Goloustnaya Delta in June 2005 (Hellström 2005); regularly winters on Angara outflow (Mel'nikov and Shcherbakov 1990, Mel'nikov 2000f, I. Fefelov *in litt.* 2008); three females with ducklings recorded (but no details or date given: Bogorodskiy 1989). **SD:** exceptional breeding records include a nest with nine eggs found at Motaikha Channel on 29 May (Bakutin 1957), and a family of eight chicks observed on 18 July 1989 on upper Srednyaya Channel (Mel'nikov 1998g); there are no other summer records from SD (Fefelov *et al.* 2001); spring migration recorded in the second half of April (Skryabin 1975, Shinkarenko 1979). **SEB:** recorded on spring and autumn migration in Baykal'skiy Reserve with peaks on 3–10 May and 19–28 September (Vasil'chenko and Vasil'chenko 1976); recorded at Pereyemnaya River on 8 June 2003 (Madge and McRae 2003); a female seen at Bol'shoy Mamay on 5 June 2008 (Hellström 2008). **Assessment:** Occasional breeder (SWB, SD); uncommon migrant; regularly winters at Anagara outflow.

[White-headed Duck *Oxyura leucocephala*
Endangered. **Pre-1850:** recorded in the mid-eighteenth century at Nikola (Galkina 1984 *fide* Popov 2004b). **Remarks:** Popov (2004b) did not cite Galkina (1984). Neither I. Fefelov (*in litt.* 2008) nor I was able to locate this source to verify the information. I thus do not list this species as recorded at LB.]

Water Rail *Rallus aquaticus*
SWB: recorded at Kultuk (Dybowski and Godlewski 1870, Taczanowski 1893). **SD:** rare breeder (Bakutin 1950, Shvetsov and Shvetsova 1967); first heard in Khalyun Channel on 25 May 1973 and later regularly heard at night from mowed and wet meadows at various places during 1973–1989, with a maximum of 30–35 males at Sredniy Peremoy Channel on 15 June 1979 (Mel'nikov 2000a; records based on voice only); searches for the species failed in 1989–1996 (Fefelov *et al.* 2001). **Assessment:** Formerly rare, possibly irregular breeder but not recorded after 1990. **Taxonomy:** Spangenberg (1951) assigned birds from LB to the East Palearctic subspecies *indicus*, split as Eastern Water Rail *R. indicus* in Rasmussen and Anderton (2005).

Spotted Crake *Porzana porzana*
SD: Mel'nikov (1998b, 2000a) reportedly flushed a bird from its nest at Srednyaya Channel on 23 June 1982, and heard calls in spring 1983. **Assessment:** Vagrant, perhaps occasional breeder (SD).

Baillon's Crake *Porzana pusilla*
NWB: one seen at Tyya Delta on 7 June 2008 (Bray *et al.* 2008). **VAD:** recorded (Tolchin *et al.* 1974). **NEB:** calls heard at Davsha River c.11 km from delta on 19 July 1975 (Belyaev 1980). **MM:** irregularly recorded on muddy shores in autumn, but never at Ol'khon Island (Pyzh'yanov *et al.* 1979, 1998). **SWB:** breeds at Kultuk where nest found (Dybowski and Godlewski 1870, Taczanowski 1873, 1893); recorded at Yelantsy on 6 September 1976 (Pyzh'yanov *et al.* 1979, 1998). **SNI:** common breeder (Skryabin and Filonov 1962); a juvenile mist-netted at Kedrovka on 25 August 1991 (Heyrovský *et al.* 1992); two nests found in marshes at Kedrovka on 7 and 8 July 1993 (MŠ); repeatedly heard north of Barmashevyye Lakes on 17–18 June 1994, and a juvenile caught at Kedrovka on 24 August 1994 (JM). **SWB:** recorded at Kadil'nyy Cape on 26 May 1983 (Bogorodskiy 1989). **SD:** uncommon breeder (Bakutin 1950, Shvetsov and Shvetsova 1967, Mel'nikov 1979a, 1998b, Fefelov *et al.* 2001, Fefelov and Baskakov 2001); numbers increased in late 1970s, but then fell to an estimated 50 pairs in c.1990 (Mel'nikov 1998b); birds arrive at SD in second half of May and leave in early October (Mel'nikov 1979a, Fefelov *et al.* 2001). **Assessment:** Uncommon breeder.

[Band-bellied Crake *Porzana paykullii*
SD: all published records of Corn Crake *Crex crex* referred to this species according to Mel'nikov (2000a). **Remarks:** Mel'nikov (2000a) stressed that all records of Corn Crake were based on voice only, and hence may refer to the similar-sounding Band-bellied Crake. However, Taylor and Van Perlo (1998) described the voices as very different from each other, so Mel'nikov's (2000a) assumptions are unjustified. Mel'nikov and Mel'nikova (2000) reportedly collected a Band-bellied Crake at a nest in the Irkut Delta west of LB, but presented no data on identification or reference to literature they used. I thus do not not list this species as recorded at LB.]

Corn Crake *Crex crex*
Near Threatened. **Pre-1850:** recorded at Kudara in summer 1772 (Georgi 1775). **VAD:** recorded in Kichera valley and on islets in Verkhnyaya Angara Delta (Lipin *et al.* 1976). **SD:** rare breeder in early 1960s (Shvetsov and Shvetsova 1967); a male heard at Murzino in summer 1978 and in Staryy Galutay Channel on 16 June 1994 (V. Zhuravlev in Fefelov *et al.* 2001). **Assessment:** Rare visitor. **Remarks:** See under Band-bellied Crake for comments. Georgi (1775: 172) stated that Corn Crake (which he knew under the correct Latin, German and Russian names) occurs in open steppes at Barguzin, Kudara and Irkutsk. It is thus possible that Corn Crake inhabited the LB area in the eighteenth century and that its range subsequently contracted westwards.

Common Moorhen *Gallinula chloropus*
SWB: recorded breeding at Kultuk (Dybowski and Godlewski 1870, Taczanowski 1877). **SD:** six recorded in the Delta of Khirel'da Channel on 26 June 1978, two families with chicks recorded in Srednyaya Channel on 12 June 1981, a family with chicks found in Srednyaya Channel on 9 June 1982, and one observed in Srednyaya Channel on 16 June 1989 (Mel'nikov 1999a); a juvenile collected at Khirel'da Channel on 28 September 1994 (Pyzh'yanov *et al.* 1997, 1998). **Assessment:** Rare visitor and irregular breeder.

Common Coot *Fulica atra*
NWB: one seen at Kotel'nikovskiy Cape in summer 1930 (Shtegman 1936). **NEB:** an adult female was collected at

Sosnovka on 23 May 1915 (Shtegman 1936); recorded in Sosnovka Delta in spring 1933 (Belyaev 1980); recorded in Barguzinskiy Reserve (unspecified location) on 26 May 1958 (Skryabin and Filonov 1962); one with broken wing caught at Davsha on 7 November 1970 (Belyaev 1980). **UI:** one recorded in June 1976 (Yumov 1990); recorded on migration (Matveychuk 1991). **SNI:** formerly recorded as breeder (Gagina 1960a) and as common migrant (Skryabin and Filonov 1962); common at Istok until 1957 (Yegorov 1980 according to local inhabitants); absent 1977–1979 (Yegorov 1980), 1991–1994 and 2001 (Heyrovský *et al.* 1992, JM, PS). **SWB:** recorded at Kultuk (Taczanowski 1893); breeds in a marshland at southern end of LB (Bogorodskiy 1989). **SD:** common breeder (Bakutin 1950, Shvetsov and Shvetsova 1967, Mel'nikov *et al.* 1983a,b, Mel'nikov 1991a, Fefelov *et al.* 2001); in late 1970s and very early 1980s, population was estimated at 1,500–2,400 pairs plus 500–700 non-breeding individuals in spring, and 12,000–18,000 individuals in autumn (Mel'nikov *et al.* 1983a,b, Mel'nikov 1991a); in 1982 (when water levels were low) the population fell to 500–600 pairs (Mel'nikov *et al.* 1983a,b, Mel'nikov 1991a), rising to 7,500 pairs in mid-1980s (when water levels were high: Mel'nikov 1991a, see also Mel'nikov *et al.* 1987a); birds arrive in late April, and most leave by mid-October (Fefelov *et al.* 2001). **Assessment:** Common breeder in SD; probably bred in SNI until 1950s; currently a rare visitor outside of SD. **Remarks:** Common Coot breed only locally around LB, in particular near Irkutsk (Bogorodskiy 1989) and in the northern part of Barguzinskaya Valley (1994 records: JM and PS; see also Lyamkin 1977).

Common Crane *Grus grus*

VAD: regularly seen at Nizhneangarsk on 4–6 June 1991 (Olsson 1991). **NEB:** 7–8 pairs bred in 1980s (Ananin 1986); breeds on coastal marshes (Ananin and Fedorov 1988, Mel'nikov *et al.* 1988b). **UI:** vagrant (Yumov 1990); recorded on migration (Matveychuk 1991). **SNI:** recorded on 21 July (Turov 1923); common breeder (Gagina 1960a, Skryabin and Filonov 1962, Heyrovský *et al.* 1992, JM in 1993); a pair seen on 6 August 1994 at Kordon (PS); a pair with juvenile seen on 18 August 1994 at Kedrovka, and a pair with two juveniles seen on 6 September 1994 at Kedrovka (PS); recorded at Barmashevyye Lakes on 12 June 2001 and in marshes at south-eastern corner of Chivyrkuyskiy Bay on 21 June 2001 (JM). **SWB:** common on migration at Kultuk, mainly around mid-April [= late April/early May NS] and in August [= mid-August–mid-September NS] (Taczanowski 1873, 1893); recorded on spring migration at Slyudyanka from 15 April in 1935 (Fedorov 1936). Bogorodskiy (1989) mentioned that Common Cranes migrate and breed at SWB without giving any details. **SD:** common breeder, but population size variable (Mel'nikov 1999b, Fefelov *et al.* 2001); rare breeder in 1955–1962 (Shvetsov and Shvetsova 1967); 12–25 pairs in early 1980s (Mel'nikov 1984a, Mel'nikov *et al.* 1988b); 28 pairs in 1977, 25 pairs in 1982, 50 pairs in 1985, 72 pairs in 1989 (Mel'nikov 1999b); up to 85 pairs in late 1980s (Mel'nikov 1998b), 35–40 pairs in mid-1990s (Fefelov *et al.* 2001); at least 40 pairs around 2000 (Fefelov and Baskakov 2001); at least 15 pairs in 2002 (Fefelov *et al.* 2003); birds arrive in second half of April and depart by mid-September (Fefelov *et al.* 2001; see also Mel'nikov 1992, 2002). **Note:** See also Popov and Mel'nikov (1993). **Assessment:** Uncommon breeder in large wetlands, and uncommon migrant.

White-naped Crane *Grus vipio*

Vulnerable. **SD:** recorded sometime during 1955–1962 (Shvetsov and Shvetsova 1967). **Note:** Radde (1857, 1861b) reported encounters with unidentified cranes in NWB and SWB, which he described as being the size of Common Crane, but with whitish wings and black wing-tips, stating that they were different from Siberian Crane *Grus leucogeranus*; Shtegman (1936) suggested that these were White-naped Crane. **Assessment:** Rare visitor in the past, no recent records (see also Vasil'chenko and Prokop'yev 1988d).

Hooded Crane *Grus monacha*

Vulnerable. **VAD:** recorded (Mel'nikov *et al.* 1988). **NEB:** recorded on migration (Tarasov 1965); an immature female collected on migration on 18 September 1914 at Kudalda River (Shtegman 1936, Shul'pin 1936, Belyaev 1980); recorded in Barguzinskiy Reserve on 29 May 1954 and 27 April 1972 (Gusev 1960, Skryabin *et al.* 1988); one recorded at Sosnovka on 9 May 1972 and another near Davsha on same day (Belyaev 1980). **SWB:** rare visitor at Kultuk (Dybowski and Godlewski 1870, Taczanowski 1893). **SD:** bred rarely 1955–1960 (Shvetsov and Shvetsova 1967), but this is probably an incorrect interpretation of non-breeding birds seen in summer (Fefelov *et al.* 2001); one observed in Kabanskiy Reserve on 8 June 1979 (Mel'nikov *et al.* 1988, Mel'nikov 2000a). **Note:** See also Popov (1993k). **Assessment:** Rare visitor. **Remarks:** A flightless juvenile Hooded Crane was captured halfway between LB and Ulan-Ude in August 1981; this appears to be the only breeding record of this species in Buryatia (Dorzhiyev *et al.* 1985, Yumov 1992). See also Neyfel'dt (1977), Vasil'chenko and Prokop'yev (1988e), and Collar *et al.* (2001).

Siberian Crane *Grus leucogeranus*

Critically Endangered. **Pre-1850:** rare on eastern side of LB (Georgi 1775). **SWB:** recorded at Kultuk (Dybowski and Godlewski 1870). **SD:** one recorded at Shigayevo on 9 May 1972 (S. Lipin in Tolchin *et al.* 1974); two seen in Tikhoy Galutay Channel in September 1979 (Yu. Mel'nikov in Mel'nikov *et al.* 1988); two seen in Khirel'da Channel on 3 September and one on 6 September 1982 (S. Shchepin in Mel'nikov 2000a). **Note:** Flocks seen on western shores of LB in summer 1855 (Radde 1857). Rare migrant on coasts according to Gagina (1958b). See also Popov (1993j). **Assessment:** Vagrant. **Remarks:** See comments under White-naped Crane.

Demoiselle Crane *Grus virgo*

NWB: a flock of 10 birds seen flying at Malyy Solontsovyy Cape on 15 September 1989 and two birds seen at Pokoynyy Cape for several days from 28 April 1996 (Olovyannikova 1998). **NEB:** an adult collected at Davsha Delta on 25 May 1957 (Skryabin 1960, Gusev 1962); records at Barguzinskiy Reserve on 5 June 1966 at Turkulik River c.9 km from its delta, 23 May 1967 at Davsha River c.10 km from its delta, and 6 June 1975 at Sosnovka (Belyaev 1980). **MM:** recorded (Mel'nikov *et al.* 1988); four birds seen flying at Ulan-Khushin [= Khalgay] on 10 August 1998 (V. Ryabtsev and I. Sirokhin in Ryabtsev

1999); regularly recorded at Khulan-Ushin from 1996 and a pair with chicks seen there in summer 1997 (*per* local inhabitants: Ryabtsev 1999). **SWB:** regular visitor at Kultuk, not rare on migration, arriving in first half of May [= second half of May NS], and in autumn during mid-August to mid-September [= early to late September NS], with last individual seen on 25 September [= 7 October NS] (Dybowski and Godlewski 1870, Taczanowski 1873, 1877). **SD:** a flock of eight seen at Khirel'da Channel on 28 May 1982 (Mel'nikov 2000a); occasionally seen in 1980s (V. Zhuravlev in Fefelov *et al.* 2001); a flock of six seen flying above Galutay and Glukhaya channels on 6 June 1991 (Fefelov *et al.* 2001); one observed at Khirel'da Channel on 7 June 1991 (Tupitsyn and Fefelov 1995a, L. Seina in Fefelov *et al.* 2001, Fefelov and Baskakov 2001); a flock of three seen flying at Istomino on 25 May 2002 (Fefelov *et al.* 2003). **Assessment:** Rare visitor, exceptional breeding in MM probable (see also Vasil'chenko and Prokop'yev 1988f and Popov 1993l). **Taxonomy:** Often listed as *Anthropoides virgo* in Russian literature.

Yellow-legged Buttonquail *Turnix tanki*
NEB: a juvenile female recorded at Kudalda Delta on 21 August 1941 (Belyshev 1947, Gagina 1962a); one recorded north of Davsha on 19 August 1985 (Ananin and Fedorov 1988). **Assessment:** Vagrant.

Eurasian Oystercatcher *Haematopus ostralegus*
SWB: one found dead at Kultuchnaya Delta in August 1995 (Durnev *et al.* 1996). **Assessment:** Vagrant. **Taxonomy:** This and other records in Irkutsk Province probably refer to the Central Asian subspecies *H. o. longipes* (Mel'nikov 1999c).

Black-winged Stilt *Himantopus himantopus*
SD: two observed in the upper reaches of Tikhoy Galutay Channel on 12 June 1973, and two seen repeatedly on Galunchiki sandbank in Masaikha Channel in mid-June 1979 (Mel'nikov 2000a). **Assessment:** Vagrant.

Pied Avocet *Recurvirostra avosetta*
Pre-1850: recorded at salt lakes at the 'Angara' (location uncertain, but similar habitats exist west of LB at Usol'ye-Sibirskoye: I. Fefelov *in litt.* 2008) and at Barguzin in Barguzinskaya Valley east of LB (Georgi 1775). **VAD:** a specimen collected at Bludnoye Lake in July 1966 (I. Nikonov in Tolchin *et al.* 1977); seen at Dushkachan in summer (year not given: G. Myasnikov in Tolchin *et al.* 1977); a flock of ten seen in VAD on 18 May 1973 (Tolchin *et al.* 1977); singles seen in VAD on 31 May 1973 and 4 June 1973 (Tolchin *et al.* 1977); a pair recorded on 19 May 1977 (Tolchin *et al.* 1979). Tolchin *et al.* (1977) reported that local inhabitants knew this species quite well, and considered breeding in the interior of marshes possible. **SD:** a pair recorded at Galunchiki sandbank at Masaikha on 29 July 1979 (Mel'nikov 2000a). **Assessment:** Rare visitor, occasional breeder. **Remarks:** Breeding has been recently recorded at Usolye-Sibirskoe, west of LB (Salovarov and Kuznetsova 2000).

Oriental Pratincole *Glareola maldivarum*
NWB: singles seen at Tyya Delta on 6 and 11 June 2008 (Bray *et al.* 2008). **VAD:** recorded (Tolchin *et al.* 1977). **MM:** one seen in Sarma Delta on 3 June 1982 (Pyzh'yanov *et al.* 1997, 1998). **SD:** three observed in Adunovskaya Channel on 12 June 1975 and one there on 10 June 1976 (Mel'nikov 2000a); two observed at Istomino village on 13 June 1990 (Bold *et al.* 1991, Dorzhiyev and Yelayev 1995). **Assessment:** Rare visitor.

Little Ringed Plover *Charadrius dubius*
NWB: adult male collected at Sosnovka on 22 May 1915 (Shtegman 1936); a male collected at Malyy Solontsovyy Cape on 25 June 1958 and a female collected there in 1960 (O. Gusev in Popov *et al.* 2002); a breeding pair recorded at Pokoynyy Cape on 6 July 1955 (Malyshev 1960a); further records include breeding pairs at Pokoynyy Cape on 1 July 1989 and 28 May 1990, four individuals at Antyukhe Cape on 12 June 1991, one at Bol'shoy Solontsovyy Cape on 30 May 1992, one at Pokoynyy Cape on 7 July 1995, a flock of four there on 12 May 1998, and two there on 16 May 1998 (Popov *et al.* 2002); breeding recorded at Tyya Delta on 4 June 2005 (Hellström 2005); seen at Tyya Delta on 10 June 2008 (Bray *et al.* 2008). **VAD:** recorded (Gagina 1954); common breeder (Tolchin *et al.* 1977); regularly encountered between Nizhneangarsk and Kichera on 4–8 June 1991 (Olsson 1991). **NEB:** common breeder and migrant on LB shores in Barguzinskiy Reserve (Belyaev 1982); recorded (Belyaev 1984). **MM:** common breeder on Ol'khon Island (Litvinov and Gagina 1977); regular breeder and common migrant in Sarma Delta (S. Pyzh'yanov in Anthes *et al.* 2004). **SNI:** several birds showing distraction behaviour observed repeatedly in July 1991 in Barguzinskiy Bay, and a juvenile seen there in early August 1991 (Heyrovský *et al.* 1992); recorded at Kedrovka on 6 June and 23 July 1993 (JM), 2–3 individuals seen repeatedly in the Bol'shoy Chivyrkuy Delta on 16–19 June 2001, but breeding not confirmed (JM, PS); one seen at the south-eastern corner of Chivyrkuyskiy Bay on 21 June 2001 (JM); a breeding pair observed on 14–16 July 2001 at Barguzinskiy Bay near Ust'-Barguzin (PS). **SWB:** common breeder at Kultuk (Taczanowski 1873); three individuals collected on 4 July 1913 (Keve 1948); not reported from LB shores, but common breeder and migrant further inland (Bogorodskiy 1989); four seen on 8–9 May 1995 at Kultuk (PS). **SD:** common breeder, with population size varying from 30–50 pairs in years with high water to 180–250 pairs in years with low water (Tolchin *et al.* 1977, Mel'nikov 1998b, Fefelov *et al.* 2001); arrives in late April–early May, autumn migration during mid-July to mid-September (Tolchin *et al.* 1977, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **SEB:** five pairs recorded at Vydrino on 17–19 June 2004 (Haldén 2004). **Assessment:** Common breeder and migrant.

Common Ringed Plover *Charadrius hiaticula*
NWB: one seen at Tyya Delta on 8 June 2005 (Hellström 2005). **VAD:** common on spring migration on 11–26 May in 1972–1973 (Tolchin *et al.* 1977). **MM:** one recorded in Sarma Delta in July–August 2002 (Anthes *et al.* 2004). **NEB:** recorded on spring migration in Barguzinskiy Reserve (Belyaev 1982, 1984). **SNI:** two seen on sandy beaches in Barguzinskiy Bay at Kedrovka on 23 July 1993 (JM) and one seen there on 6 September 1993 (PS). **SWB:** rare on migration at Kultuk (Dybowski and Godlewski 1870, Taczanowski 1873). **SD:** two observed at Militseyskaya Channel on 30 June 1976 and two observed at Krivaya Channel on 16 June 1982

(Mel'nikov 2000a); young female collected on 21 September 1976 by A. Shinkarenko (Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004, skin preserved at Irkutsk University). **Assessment:** Rare migrant.

Kentish Plover *Charadrius alexandrinus*
NWB: one seen at Tyya Delta on 6 and 8 June 1991 (Olsson 1991). **VAD:** one collected at Kichera Delta on 22 May 1972 (Tolchin *et al.* 1977). **SD:** two observed at Shigayevo on 8 June 1991 (Mel'nikov 2000a). **Note:** Fefelov and Baskakov (1991) erroneously transposed Mel'nikov's (2000a) data for Kentish and Oriental Plovers *Charadrius veredus*. **Assessment:** Vagrant.

Lesser Sand Plover *Charadrius mongolus*
NEB: recorded at Davsha on 21 May 1961 (Tolchin *et al.* 1977, Belyaev 1984, Mel'nikov 2000a). **SWB:** one recorded at Bol'shaya Rechka on 2 June 1987 (Svensson and Hedgren 1987). **SD:** one observed on Kokuy Island on 18 June 1982 (Mel'nikov 2000a); one seen between Srednyaya and Kolpinnaya channels on 7 June 2002 (Fefelov *et al.* 2003, Fefelov and Tupitsyn 2004; identification confirmed by I. Fefelov *in litt.* 2008). **Assessment:** Vagrant. **Remarks:** Fefelov *et al.* (2001, 2003) and Fefelov and Tupitsyn (2004) stressed the similarity between this species and the next, and noted that the specific identity of earlier records of sand plovers at LB should be considered uncertain; I concur.

Greater Sand Plover *Charadrius leschenaultii*
VAD: a pair recorded, of which male with enlarged testes was collected at Dagary on 29 June 1972 (Tolchin *et al.* 1979, Dorzhiyev and Yelayev 1998; specimen preserved at Irkutsk University, identity confirmed by Faunisticheskaya Komissiya po Kulikam 1992), one observed on Yarki Island on 11 June 1990 by M. Beaman and S. Madge (in Dorzhiyev and Yelayev 1995a). **SD:** one observed in the delta of Lobanovskaya Channel on 22 May 1982 (Mel'nikov 2000b). **Assessment:** Vagrant. **Remarks:** See Lesser Sand Plover.

Oriental Plover *Charadrius veredus*
VAD: one observed on 26 May 1973 (Tolchin *et al.* 1977). **NEB:** one recorded at Tompuda Delta on 30 May 1958 (Skryabin 1960). **SD:** one collected in Klyuchikha Bay on 22 September 1981, and one observed in the delta of Severnaya Channel on 28 May 1989 (Mel'nikov 2000a). **Note:** See under Kentish Plover. **Assessment:** Vagrant. **Taxonomy:** Listed as *C. asiaticus veredus* by some Russian authors (e.g. Gladkov 1951).

Eurasian Dotterel *Charadrius morinellus*
NWB: a flock of three seen at Pokoynyy Cape on 15 September 1999 (Olovyannikova 2000b, Popov *et al.* 2002) **NEB:** three recorded at Davsha in autumn 1961 and autumn 1962 (Ananin and Fedorov 1988). **SWB:** rare on migration at Kultuk, with one collected on 20 September [= 2 October NS], during 1869–1871 (Dybowski and Godlewski 1870, Taczanowski 1873). **SD:** one seen at Posol'skoye on 20 September [= 2 October NS] 1855 (Radde 1861b); recorded on migration during 1955–1962 (Shvetsov and Shvetsova 1967), but no later records available (Fefelov *et al.* 2001). **Assessment:** Rare visitor. **Remarks:** Breeds in the alpine belt of mountains surrounding LB (Doppel'mayr 1926, Vasil'chenko and Unzhakov 1977, Vasil'chenko 1982, 1987, Unzhakov 1980, 1988, Olovyannikova 1998, Popov *et al.* 2002, Popov 2004b).

Pacific Golden Plover *Pluvialis fulva*
NWB: one collected in Zavorotnaya Bay on 25 August 1959 and another at Malyy Solontsovyy Cape on 26 August 1959 (O. Gusev in Popov *et al.* 2002); one seen at Tyya Delta on 6 June 1991 (Olsson 1991); a flock of four seen at Pokoynyy Cape on 20–23 September 1995 (Popov *et al.* 2002); two seen at Tyya Delta on 8 and 10 June 2008 (Bray *et al.* 2008). **VAD:** common on spring migration on 23–29 May 1972, rare on spring migration in 1973 (Tolchin *et al.* 1977); migrant (Popov 2004b). **NEB:** an adult male collected at Sosnovka on 14 September 1915 (Shtegman 1936), migrant (Ananin and Fedorov 1988). **MM:** common on spring (30 May–13 June) and autumn (6 August–20 September) migration (Pyzh'yanov *et al.* 1979); common migrant (Anthes *et al.* 2004). **UI:** regularly recorded on autumn migration (Yumov 1990); recorded as vagrant (Matveychuk 1991). **SNI:** an adult in breeding plumage with one juvenile observed at the southernmost Barmashevoye Lake on 21 August 1991 (JM in Heyrovský *et al.* 1992); three individuals seen at Kedrovka on 4 June 1993 (MŠ); singles seen at Kedrovka on 13 and 18 September 1994 (JM). **SWB:** common on migration at Kultuk (Taczanowski 1873, 1893); common on migration (Bogorodskiy 1989). **SD:** common on spring migration during 15 May–3 June (flocks of 20–600 individuals) and on autumn migration duringn 13 August–16 October (Tolchin *et al.* 1977, Zhuravlev *et al.* 1991, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **Assessment:** Common spring and autumn migrant. **Taxonomy:** Sometimes listed as *Charadrius dominicus* or *P. dominicus* in Russian literature. See Connors (1983).

European Golden Plover *Pluvialis apricaria*
VAD: one shot at Dagary on 12 June 1978 (Tolchin *et al.* 1979, I. Fefelov *in litt.* 2008). **Assessment:** Vagrant.

Grey Plover *Pluvialis squatarola*
NWB: a flock of eight seen at Pokoynyy Cape on 25 September 1995 and five there on 11 September 1999 (Olovyannikova 2000b, Popov *et al.* 2002). **VAD:** one seen on 5 June 2005 north of Yarki Island (Hellström 2005). **MM:** recorded on Ol'khon Island on 11 August 1958 (Litvinov and Gagina 1977, Bogorodskiy 1989); recorded in Sarma Delta on 6 September 1976 and 7 September 1977 (Bogorodskiy 1989); common non-breeding visitor to Sarma Delta (S. Pyzh'yanov in Anthes *et al.* 2004); one recorded in Sarma Delta in August 2003 (Anthes *et al.* 2004). **SWB:** rare migrant at Kultuk (Dybowski and Godlewski 1870). **SD:** spring record limited to large flocks observed in Adunovskaya Channel on 12 June 1975 and 10 June 1976 (Mel'nikov 2000a); two individuals recorded in Khalyun Channel on 29 May 1984 (Zhuravlev *et al.* 1991, Fefelov *et al.* 2001); one seen at Murzino on 30 May 1991 and two in Khalmetey Channel on 31 May 1992 (Fefelov *et al.* 2001); regularly recorded in small numbers on autumn migration, late August–mid-October (Tolchin *et al.* 1977, Zhuravlev *et al.* 1991, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004), with an exceptionally late record on 12 December (Tolchin *et al.* 1977). **Assessment:** Rare migrant.

Northern Lapwing *Vanellus vanellus*
Pre-1850: very rare, not observed every summer (Georgi 1775). **NWB:** a pair with two young observed at Pokoynyy Cape on 28 July 1995 (Popov *et al.* 2002); common migrant along LB shores from second half of May in spring, and during early August to late September (Popov *et al.* 2002). **VAD:** common breeder, spring arrival during 18–22 April in 1972–1973 (Tolchin *et al.* 1977); regularly encountered between Nizhneangarsk and Kichera on 4–8 June 1991 (Olsson 1991); common north of Yarki Island in June 2005 (Hellström 2005). **NEB:** one collected at Sosnovka on 14 July (Turov 1923); uncommon breeder, common spring and autumn migrant in Barguzinskiy Reserve (Belyaev 1982). **MM:** common breeder on Ol'khon Island (Litvinov and Gagina 1977); breeds in Sarma and Kurma deltas (Tolchin *et al.* 1977); common breeder and migrant in Sarma Delta (Anthes *et al.* 2004). **UI:** common migrant and summer visitor (Yumov 1990, Matveychuk 1991). **SNI:** two seen in Barguzin Delta in summer 1930 (Shtegman 1936); rare breeder, not recorded in autumn (Skryabin and Filonov 1962); common breeder in early 1970s (Tolchin *et al.* 1977); common in marshes at Lake Arangatuy, 1991–1994 and 2001 (Heyrovský *et al.* 1992, JM, PS); a pair seen at estuary of Barguzin River on 2 July 1998 (PS); 1–2 pairs recorded in Bol'shoy Chivyrkuy Delta on 16–19 June 2001 (JM, PS); flightless juveniles recorded at Ust'-Barguzin on 13 July 2005 (JM). **SWB:** only two singles recorded in June (in 1855?: Radde 1861b); common on migration at Kultuk, with some staying over summer (Taczanowski 1873, 1893); recorded breeding in Anga Delta, common migrant during mid-April–early May and mid–late August (Bogorodskiy 1989). **SD:** recorded breeding 1933–1949 (Bakutin 1950) and 1955–1962 (Shvetsov and Shvetsova 1967); common breeder from 1970s (Tolchin *et al.* 1977, Zhuravlev *et al.* 1991, Fefelov *et al.* 2001); birds arrive in late March or early April and depart by late October (Tolchin *et al.* 1977, Zhuravlev *et al.* 1991, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **Assessment:** Common breeder in marshlands and river deltas; common spring and autumn migrant throughout. Northern Lapwing was reported as a rare visitor until 1930s and as common breeder from 1970s. It thus seems to have spread over LB in the mid-twentieth century.

Grey-headed Lapwing *Vanellus cinereus*
VAD: one collected at Dagary on 27 June 1963 (Skryabin 1967b, Tolchin *et al.* 1977). **Assessment:** Vagrant.

Red Knot *Calidris canutus*
VAD: adult male recorded on Millionnyy Islet on 8 August 1978 and three juveniles recorded on 23 August 1978 (Tolchin *et al.* 1979); a flock of six birds seen on Millionnyy Islet on 23 August 1992 (Pyzh'yanov *et al.* 1997). **MM:** one collected in Sarma Delta on 29 August 1989 (Pyzh'yanov *et al.* 1997); one seen in Sarma Delta on 10–16 August 2003 (Anthes *et al.* 2004). **SWB:** one collected at Kultuk on 24 August [= 5 September NS] 1870 (Taczanowski 1873, 1877, 1893). **SD:** a juvenile collected on 17 September 1972 (Tolchin 1974, Tolchin *et al.* 1977; specimen at Irkutsk University). **Assessment:** Rare visitor. **Taxonomy:** Taxonomy of East Siberian Red Knot is complex (see Gladkov 1951, Baker *et al.* 1994, Tomkovich 1990, 2001, Engelmoer and Roselaar 1998, Tomkovich and Serra 1999). Geographic origins and taxonomic identity of birds recorded at LB are unknown.

Sanderling *Calidris alba*
VAD: recorded on autumn migration 17 July–3 October 1972 (Tolchin *et al.* 1977). **NEB:** adult male collected at Sosnovka on 17 September 1914 (Shtegman 1936); recorded on migration (Belyaev 1984). **MM:** recorded in Sarma Delta on 6–7 September 1976 and 27 August 1977 (Bogorodskiy 1989); small flocks seen on Ol'khon Island on 23 August 1973 and 4 September 1973 (Litvinov and Gagina 1977); two individuals seen in Sarma Delta in July–August 2002 (Anthes *et al.* 2004). **SNI:** recorded on migration (Gagina 1960a). **SWB:** recorded at Kultuk on migration during mid-August to mid-September [= late August/early September to late September NS] (Taczanowski 1873, 1893). **SD:** common at Polsol'sk on autumn migration, 1972 (Tolchin *et al.* 1977); recorded in small numbers during late August–early October (Zhuravlev *et al.* 1991, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **SEB:** migrates along coasts in May and September (Vasil'chenko 1987). **Assessment:** Exceptional spring and rare autumn migrant.

Red-necked Stint *Calidris ruficollis*
NWB: two collected at Zavorotnyy Cape on 25 August 1959 (O. Gusev in Popov *et al.* 2002; two seen at Tyya Delta on 4 June 2005 (Hellström 2005). **VAD:** six collected on 30 July 1913 (Keve 1948); common on autumn migration 29 July–18 August 1972 (Tolchin *et al.* 1977); one collected on 2 June 1968 (N. Skryabin in Fefelov *et al.* 2001), 2–3 seen on Yarki Island on 6 June 1991 (Olsson 1991); recorded on spring migration 29 May–8 June (N. Safronov in Fefelov *et al.* 2001). **NEB:** rare summer visitor in Barguzinskiy Reserve (Belyaev 1982). **MM:** common on autumn migration mid-July–late September (Pyzh'yanov *et al.* 1979, Anthes *et al.* 2004). **SNI:** two males collected at Ust'-Barguzin on 22 July 1930 (Shtegman 1936); recorded on migration (Gagina 1960a); an adult seen on sandy beaches of Barguzinskiy Bay on 23 July 1993 and one seen right of Barguzin River where it enters Barguzinskiy Bay on 28 July 1993 (JM); three seen on 1 August 1994 at Ust'-Barguzin (PS); eight seen on 29–30 August 1994 at Kedrovka (PS); recorded at Kedrovka on 5 and 12 September 1994 (JM, PS). **SWB:** two males collected at Kultuk on 30 July and 31 August 1913 (Keve 1948); one seen at Slyudyanka on 6 July 1979 (JMa). **SD:** rare on spring migration 20 May–1 June (Fefelov *et al.* 2001); common on autumn migration mid-August–late September (Zhuravlev *et al.* 1991, Goroshko 1999, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **Assessment:** Rare spring and common autumn migrant.

Little Stint *Calidris minuta*
NWB: one collected in Zavorotnaya Bay on 5 August 1959 (O. Gusev in Popov *et al.* 2002), six recorded at Tyya Delta on 6 June 1991 (Olsson 1991); two seen at Pokoynyy Cape on 15 August 1991 and two seen at Bol'shoy Solontsovyy Cape on 25 August 1991 (Popov *et al.* 2002); 15 recorded at Tyya Delta on 4 June, nine on 8 June and 11 on 9 June 2005 (Hellström 2005); 'a few' seen at Tyya Delta on 6–10 June 2008 (Bray *et al.* 2008). **VAD:** common on autumn migration (Tolchin *et al.* 1977); recorded in small numbers during 24 May–2 June (N. Safronov in Fefelov *et al.* 2001). **NEB:** one recorded

in autumn 1972–1974 in Barguzinskiy Reserve (Belyaev 1982); recorded in Barguzinskiy Reserve on spring migration several times during 18–28 May (Belyaev 1984). **MM:** recorded on migration on Ol'khon Island in August–September (Litvinov and Gagina 1977); recorded in Sarma Delta on 28 May 1977 and 27 August 1976 (Bogorodskiy 1989); frequently recorded in Sarma Delta in July–August 2002–2003 (Anthes *et al.* 2004). **SNI:** common on migration on 21–25 August 1991 (Heyrovský *et al.* 1992); eight seen at Barmashevyye Lakes on 6 September 1994 (PS); recorded at Ust'-Barguzin on 13–14 July 2005 (JM). **SWB:** recorded at Kultuk on spring and autumn migration (Taczanowski 1893); a female collected on 4 July 1913 (Keve 1948); 23 recorded at Bol'shaya Rechka on 2 June 1987 (Svensson and Hedgren 1987); one seen at Bol'shaya Rechka on 2 June 1991 (Olsson 1991). **SD:** rare on spring migration: one observed on Kokuy Island on 2 June 1993 and regularly recorded at Posol'skoye during 22 May–10 June (Fefelov *et al.* 2001); regularly encountered on autumn migration mid-August–mid-September (Zhuravlev *et al.* 1991, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **Assessment:** Rare spring and uncommon autumn migrant.

Temminck's Stint *Calidris temminckii*

NWB: recorded on LB shores on 11 and 27 July 1955 and 23 August 1955, and one collected at Shartlay Cape on 11 July 1955 (Malyshev 1960a, Popov *et al.* 2002); two collected at 25 and 26 July 1958; 13 collected at Zavorotnyy, Bol'shoy Solontsovyy and Malyy Solontsovyy Capes between 13 July and 31 August 1959 (O. Gusev in Popov *et al.* 2002); common on migration (Popov *et al.* 2002). **VAD:** common on spring migration in mid-May–early June (Tolchin *et al.* 1977). **NEB:** rare spring migrant in Barguzinskiy Reserve (Belyaev 1982, Ananin and Fedorov 1988). **MM:** common on autumn migration, last recorded on 7 October 1972 (Tolchin *et al.* 1977; uncommon migrant on Ol'khon Island in August–September (Litvinov and Gagina 1977); common in Sarma Delta in June–August, 2002–2003 (Anthes *et al.* 2004). **SNI:** recorded at Kopeshka on 7 August 1994 (JM); 10 seen at Barmashevyye Lakes on 18 August and two seen on 6–12 September 1994 (PS). **SWB:** a male collected at Kultuk on 6 September 1913 (Keve 1948). **SD:** recorded in small numbers on spring migration mid-May–early June; autumn migration starts in late July and peaks 20 August–12 September, with last individuals recorded in early October (Tolchin *et al.* 1977, Zhuravlev *et al.* 1991, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **Assessment:** Uncommon spring and common autumn migrant.

Long-toed Stint *Calidris subminuta*

NWB: collected at Malyy Solontsovyy Cape on 15 August 1959 and in Zavorotnaya Bay on 25 August 1959 (O. Gusev in Popov *et al.* 2002); a nest found at Severobaykal'sk on 8 June 1972 (Tolchin *et al.* 1979); 10–15 observed at Tyya Delta on 6 June 1991 and two seen at Tyya Delta on 8 June 1991 (Olsson 1991); one recorded on Pokoynyy Cape on 6 June 1998 and commonly recorded on LB shores on 28 August to mid-September 1999 (Olovyannikova 2000b, Popov *et al.* 2002); one seen at Tyya Delta on 8 June 2005 (Hellström 2005); two seen at Tyya Delta on 6 June 2008 (Bray *et al.* 2008). **VAD:** one collected in Verkhnyaya Angara Delta on 19 July 1926 (Gagina 1967); single nests were found at Dagary on 17 June 1973 and in June 1976 (Tolchin and Sonin 1976, Tolchin *et al.* 1977, 1979); one showing distraction behaviour observed on Yarki Island on 11 June 1990 (Bold *et al.* 1991, Dorzhiyev and Yelayev 1995); in 1972–1973 arrived in late May (Tolchin *et al.* 1977). **NEB:** one collected at Davsha on 14 August 1958 (Skryabin 1960); recorded in Barguzinskiy Reserve in early summer (Belyaev 1982). **MM:** single nests found in Sarma Delta in July 1976 and June 1978 (Pyzh'yanov *et al.* 1979); uncommon breeder in Sarma Delta in some years, but not since 1990s (Pyzh'yanov *et al.* 1997, 1998); up to three recorded in Sarma Delta in June–August of years 2002–2003 (Anthes *et al.* 2004); commonly recorded on Ol'khon Island near Khuzhir and on western shore (Tret'yakov 1934) but not recorded subsequently on Ol'khon (Litvinov and Gagina 1977). **SNI:** two nests found in marshes at Kedrovka on 9 June and 12 June 1993 (MŠ); one observed on Kopeshka Island on 3 August 1994 (JM, PS); one seen on 9 June 1998 at Kedrovka (PS). **SWB:** recorded at Kultuk on migration (Dybowski and Godlewski 1870). **SD:** common on migration in early 1960s (Shvetsov and Shvetsova 1967); rare on spring migration during 15 May–6 June, also recorded in first half of July (Mel'nikov 2000a, Fefelov *et al.* 2001); recorded on autumn migration mid-August–mid-September (Mel'nikov 2000a, Fefelov *et al.* 2001); said to breed in SD (Prokop'yev 1988), but there is no evidence (Mel'nikov 2000a, Fefelov *et al.* 2001, Fefelov and Baskakov 2001, Fefelov and Tupitsyn 2004); at least ten seen at Istomino on 29 May 2008 (Holmstedt 2008). **SEB:** recorded on migration in mid-May and September (Vasil'chenko 1987). **Note:** See also Prokop'yev (1988) and Popov (1993n). **Assessment:** Rare breeder (VAD, MM, SNI) and regular migrant. Breeding first recorded at LB in 1970s.

White-rumped Sandpiper *Calidris fuscicollis*

MM: an adult seen and photographed in Sarma Delta on 15–17 July 2002 (Anthes *et al.* 2004). **Assessment:** Vagrant. **Remarks:** Not listed by Inskipp *et al.* (1996).

Sharp-tailed Sandpiper *Calidris acuminata*

NWB: one collected at Bol'shaya Kosa Cape on 1 September 1958 (Gusev 1962); collected at Malyy Solontsovyy Cape on 15 August 1959 and in Zavorotnaya Bay on 25 August 1959 (O. Gusev in Popov *et al.* 2002). **VAD:** a flock of nine recorded on 17 June 1972 (Tolchin *et al.* 1977). **NEB:** recorded in Barguzinskiy Reserve late July–early September (Tolchin *et al.* 1977, Belyaev 1984). **MM:** regularly seen in Sarma Delta in July–August of years 2002–2003 (Anthes *et al.* 2004). **SNI:** one collected on autumn migration (Gagina 1960a); one seen right of the Barguzin River where it enters Barguzinskiy Bay on 29 July 1993, and an adult seen at Kovrizhka on 16 July 1994 (JM). **SWB:** recorded in Sarma Delta during 29 July–22 August in 1976–1977 (Bogorodskiy 1989). **SD:** recorded in small numbers 29 July–26 August (Zhuravlev *et al.* 1991, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **SEB:** recorded at Tankhoy in mid-August (Vasil'chenko 1987, Popov 2004b). **Assessment:** Rare autumn migrant, with one June record.

Curlew Sandpiper *Calidris ferruginea*

NWB: one collected at Bol'shaya Kosa Cape on 1 September 1958 (Gusev 1962, Popov *et al.* 2002). **VAD:** a male collected on 13 July 1913 (Keve 1948); common

on autumn migration from mid-July to late September (Tolchin *et al.* 1977). **NEB:** adult male collected at Sosnovka on 8 August 1914 (Shtegman 1936); recorded only on autumn migration in Barguzinskiy Reserve (Belyaev 1982, Ananin and Fedorov 1988). **MM:** rare on Ol'khon Island on autumn migration (Malyshev 1960b, Litvinov and Gagina 1977); recorded repeatedly on Ol'khon 17 July–31 August (Bogorodskiy 1989); a few seen in Sarma Delta in July–August of years 2002–2003 (Anthes *et al.* 2004). **SNI:** three recorded right of the Barguzin River where it enters Barguzinskiy Bay on 29 July 1993 (JM); two seen on 6 September 1994 at Barmashevyye Lakes (PS). **SWB:** common at Kultuk on migration in mid-May and late August–mid-September (Taczanowski 1893); a male and female collected on 4 July 1913 (Keve 1948); a female collected on 6 September 1913 (Keve 1948); recorded at Kultuk on 28 July 1923 and at Goloustnaya Delta on 4–5 September 1949 (Bogorodskiy 1989). **SD:** one on 19 May 1990 at Khirel'da Channel (Fefelov *et al.* 2001); small flocks observed on 6–8 July (Zhuravlev *et al.* 1991, Fefelov *et al.* 2001); two adult females collected in Galutay Channel on 13 July 1989 (Fefelov *et al.* 2001); common on autumn migration in early August–late September, with a late record from Posol'skoye on 3 October 1987 (Tolchin *et al.* 1977, Zhuravlev *et al.* 1991, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **Assessment:** Rare spring and common autumn migrant. **Taxonomy:** Often listed as *C. testacea* in Russian literature.

Dunlin *Calidris alpina*

NWB: 'a few' individuals seen at Tyya Delta on 4 and 9 June 2005 (Hellström 2005); one seen at Tyya Delta on 8 June 2008 (Bray *et al.* 2008). **VAD:** common on spring migration in second half of May 1973 (Tolchin *et al.* 1977); a few individuals seen on 5 June 2005 north of Yarki Island (Hellström 2005). **NEB:** rare on spring migration in Barguzinskiy Reserve (Belyaev 1982); rare spring and autumn migrant in Barguzinskiy Reserve (Belyaev 1984, Ananin and Fedorov 1988). **MM:** recorded on Ol'khon Island on 29 August 1976 (Pyzh'yanov *et al.* 1979); several juveniles observed in Sarma Delta in September 1977 (Pyzh'yanov *et al.* 1979). **SWB:** common at Kultuk on spring and autumn migration (Taczanowski 1893); a female collected on 9 September 1913 (Keve 1948). **SD:** one collected in SD on 21 May 1940 (Izmaylov and Borovitskaya 1973); not recorded on spring migration 1955–1962 (Shvetsov and Shvetsova 1967); rarely recorded on spring migration mid-May–early June in 1970s–1990s (Mel'nikov 2000a, Fefelov *et al.* 2001); one recorded at upper Glukhaya Channel on 13 July 1997 (L. Seina in Fefelov *et al.* 2001); autumn records limited to a flock seen at Posol'skiy Lake on 3 September 1971 (Tolchin *et al.* 1977); common on autumn migration during late July–mid-September (Zhuravlev *et al.* 1991, Mel'nikov 2000a, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **Assessment:** Rare spring and common autumn migrant. **Taxonomy:** Subspecific identity of birds at LB is unknown (see Gladkov 1951, Tomkovich 1986, Wenink *et al.* 1996, Engelmoer and Roselaar 1998, Lappo and Tomkovich 1998, Wennerberg *et al.* 1999, Stepanyan 2003).

Western Sandpiper *Calidris mauri*

SWB: one collected at Kultuk on 6 September 1869 (Colston 1975; specimen in Natural History Museum, Tring, UK). **Assessment**: Vagrant.

Broad-billed Sandpiper *Limicola falcinellus*

NWB: a female collected at Bol'shaya Kosa Cape on 27 August 1958 (Malyshev 1960a, Gusev 1962, Popov *et al.* 2002). **MM:** a female recorded on Ol'khon Island, Lake Khankhay, on 4 September 1973 (Litvinov and Gagina 1977); recorded in Sarma Delta on 7 September 1977 and 11 September 1977 (Bogorodskiy 1989). **SWB:** one collected at Kultuk on 8 August (Taczanowski 1893). **SD:** spring records comprised two in Khirel'da Channel on 21 May 1990 and one on 28 May 1990, summer records limited to three seen on 17 July 1972 (Tolchin *et al.* 1977, Zhuravlev *et al.* 1991); regularly recorded in small numbers on autumn migration during late July–early September (Zhuravlev *et al.* 1991, Mel'nikov 2000a, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **Assessment:** Rare spring and autumn migrant. **Taxonomy:** Birds recorded at LB probably belong to the subspecies *sibirica* (see Gladkov 1951, Stepanyan 2003).

Ruff *Philomachus pugnax*

Pre-1850: on all lakes (Georgi 1775). **NWB:** two seen at Tyya Delta on 6 June 1991 (Olsson 1991); three seen at Tyya Delta on 4 June 2005 (Hellström 2005). **VAD:** breeds (Tolchin 1974, Tolchin *et al.* 1977); one seen at Nizhneangarsk on 4 June 1991, common breeder (Pyzh'yanov *et al.* 1997, 1998). **NEB:** common at Tompuda and Davsha Deltas on 31 May–1 June 1958 (Skryabin 1960); recorded in Barguzinskiy Reserve in early summer (Belyaev 1982); recorded on migration (Ananin and Fedorov 1988). **MM:** two displaying males observed and a nest with fresh eggs found in Sarma Delta in June 1977 (Pyzh'yanov *et al.* 1979); breeding recorded in Sarma Delta 1977–1984 (Pyzh'yanov *et al.* 1997, 1998); two seen in Sarma Delta in July–August 2002 (Anthes *et al.* 2004); two flocks of five and seven seen on Ol'khon Island on 4 September 1973 (Litvinov and Gagina 1977). **SWB:** rather rare at Kultuk, recorded only in first half [= second half NS] of September (Taczanowski 1873). **SNI:** rare breeder and rare on migration (Gagina 1960a); recorded only on spring migration (Skryabin and Filonov 1962); recorded breeding (Tolchin 1976a); only non-breeding birds observed in July–August 1991 (Heyrovský *et al.* 1992); four nests found in marshes at Kedrovka on 7 June–7 July 1993 (MŠ); recorded on 2 August 1994 at Kopeshka (JM, PS); two seen on 9 June 1998 at Kedrovka and four seen on 20 June 2001 in marshes near southern end of Chivyrkuyskiy Bay (PS). **SD:** uncommon breeder in 1970s–early 1980s (Tolchin 1974, 1983a, Tolchin *et al.* 1977); common breeder from mid-1980s (Zhuravlev *et al.* 1991, Fefelov *et al.* 2001); common on migration during mid-May–mid-June and late July–late September (Zhuravlev *et al.* 1991, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **Assessment:** Breeding at LB was first recorded in 1970s (MM, SD). Common breeder in SD since mid-1980s, occasional breeder elsewhere; common spring and autumn migrant.

Jack Snipe *Lymnocryptes minimus*

VAD: breeding possible (Gagina 1961), but Tolchin *et al.* (1977) doubted this; no records in early 1970s (Tolchin *et al.* 1977). **NEB:** recorded at Davsha Bay in August 1953 (V. Skalon in Gagina 1960b); two records at Davsha (Gagina 1958b, Skryabin and Filonov 1962). **MM:** recorded on Ol'khon Island in 1933 (Tret'yakov 1934). **SNI:** displaying bird heard at Kedrovka on 5 July 1991

(D. Heyrovský in Heyrovský *et al.* 1992); several diplaying birds seen and heard north of Barmashevyye Lakes on 17–18 June 1994 (JM); at least one displaying bird heard in marshes at Kovrizhka on 8–9 July 1994 and another at Barmashevyye Lakes on 12 June 2001 (JM); heard distantly at Kedrovka on 24 and 26 June 2001 (JM). **SD:** one recorded in Adunovskaya Channel on 9 May 1972 (Mel'nikov 2001b); a juvenile male collected on 2 October 1977; one collected on 29 September 1979 (Zhuravlev *et al.* 1991, Mel'nikov 2000a, 2001b, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004); one collected on 16 October 1980 (Mel'nikov 2000a, 2001b); and 'a few' specimens found in hunters' bags during 25 September–10 October in subsequent years (Mel'nikov 2000a, 2001b). **SEB:** recorded at Selenga River 15 km west of Ulan-Ude in mid-May 1976 and mid-May 1978 (Shkatulova and Karasev 1983). **Assessment:** Rare local breeder (SNI), rare migrant elsewhere. Breeding at LB was first recorded in 1990s.

Common Snipe *Gallinago gallinago*

NWB: recorded at Kotel'nikovskiy Cape in August 1930 (Shtegman 1936), at Pokoynyy Cape on 26 June 1991 and 9 July 1995, and at Bol'shoy Solontsovyy Cape on 28 June 1991 (Popov *et al.* 2002), common on spring and autumn migration (Popov *et al.* 2002). **VAD:** common breeder (Tolchin *et al.* 1977, Vasil'chenko 1987); usually arriving 8–12 May (Tolchin *et al.* 1977); recorded in June 2005 at Yarki Island and Tipuki (Hellström 2005). **NEB:** rare breeder and common migrant in Barguzinskiy Reserve (Belyaev 1982). **MM:** breeds on Ol'khon Island (Litvinov and Gagina 1977). **UI:** recorded as vagrant (Yumov 1990, Matveychuk 1991). **SNI:** recorded on autumn migration only (Gagina 1960a); breeding confirmed (Skryabin and Filonov 1962); very common in marshes in July–August 1991 (Heyrovský *et al.* 1992); three nests found in marshes at Kedrovka in June 1993 (MŠ); recorded repeatedly there in June–August 1993 and 1994 (JM); many pairs at Barmashevyye Lakes on 16–18 June 1994 (PS) and recorded there on 12 June 2001 (JM); displaying birds seen at south-eastern corner of Chivyrkuyskiy Bay on 21 June 2001 (JM), heard in Bol'shoy Chivyrkuy Delta at night on 18 June 2001 (PS). **SWB:** common at Kultuk on migration, very rare breeder at Kultuk (Taczanowski 1873, 1893); recorded breeding at Anga Delta (Bogorodskiy 1989). **SD:** rare breeder in early 1960s (Shvetsov and Shvetsova 1967); common breeder from 1970s (Vasil'chenko 1987, Zhuravlev *et al.* 1991, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004); birds arrive in late April–May and depart by mid-October (Zhuravlev *et al.* 1991, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **Assessment:** Common breeder, population size increased in SD in 1970s. Also common spring and autumn migrant.

Pintail Snipe *Gallinago stenura*

NWB: recorded at Pokoynyy Cape on 20 May 1994 (Popov *et al.* 2002); common on autumn migration in late July and August 1958 and 1959 (O. Gusev in Popov *et al.* 2002) and in 1994 (Popov *et al.* 2002). **VAD:** common breeder (Gagina 1961), but this doubted by Tolchin *et al.* (1977); one collected in autumn 1974 (V. Sadkov in Tolchin *et al.* 1977); one seen at Nizhneangarsk on 4 June 1991 (Olsson 1991). **NEB:** adult male collected at Sosnovka on 3 August 1914 (Shtegman 1936); rare breeder and common migrant in Barguzinskiy Reserve (Belyaev 1982). **MM:** freshly dead male found on 24 August 1972 (Tolchin *et al.* 1977); recorded in Sarma Delta on 29 July 1977 (Bogorodskiy 1989); one recorded in Sarma Delta in July–August 2002 (Anthes *et al.* 2004); recorded on Ol'khon Island during late July–September and assumed to breed (Litvinov and Gagina 1977). **SNI:** commonest snipe species recorded (Skryabin and Filonov 1962); one mist-netted at Kedrovka on 23 August 1991 (PS in Heyrovský *et al.* 1992); a nest found in marshes at Kedrovka in July 1993 (VS, FZ); one mist-netted at Kedrovka on 10 July 1993 and another at Barmashevyye Lakes on 22 July 1993 (FZ, VS). **SWB:** breeds at Kultuk (Dybowski and Godlewski 1870); recorded on spring and autumn migration (Taczanowski 1893). **SD:** common breeder 1955–1962 (Shvetsov and Shvetsova 1967), but this statement said to be probably based on summer records of non-breeding individuals (Fefelov *et al.* 2001, see also Mel'nikov 2000a); uncommon on migration late April–early June and late July–mid-September (Zhuravlev *et al.* 1991, Mel'nikov 2000a, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **Assessment:** Uncommon spring and autumn migrant. Although some authors listed it as breeding at LB, there is no proof for this (also I. Fefelov *in litt.* 2008).

Swinhoe's Snipe *Gallinago megala*

NWB: collected at Malaya Kosa Cape on 15 and 18 August 1958, in Muzhinay Bay on 23 August 1958, at Bol'shaya Kosa Cape on 25 August 1958, and 10 collected between 25 July and 22 August 1959 at Malyy Solontsovyy and Pokoynyy Capes and in Zavorotnaya Bay (O. Gusev in Popov *et al.* 2002); two recorded at Pokoynyy Cape on 6 August 1998 (Popov *et al.* 2002). **VAD:** a displaying male heard in Angarakan Channel on 18 May 1973 (Tolchin *et al.* 1977). **NEB:** adult female collected at Sosnovka on 18 [=31 NS] May 1915 (Doppel'mayr 1926, Shtegman 1936); rarely recorded on spring migration in Barguzinskiy Reserve (Belyaev 1982). **MM:** recorded in Sarma Delta on 11 and 16 May 1977, and assumed to breed (Bogorodskiy 1989); one recorded in Sarma Delta in July–August 2002 (Anthes *et al.* 2004). **UI:** recorded breeding (Galaziy and Molozhnikov 1982); recorded as vagrant (Yumov 1990, Matveychuk 1991). **SNI:** recorded in Ongokon Delta, breeding in SNI considered probable (Turov 1924); one mist-netted at Kedrovka on 20 July 1993 (JM, VS, FZ). **SWB:** recorded at Kultuk (Taczanowski 1893). **SD:** common breeder 1955–1962 (Shvetsov and Shvetsova 1967); common breeder in northern part of SD (Mel'nikov 2000a); displaying males observed repeatedly, but breeding not confirmed 1980s–1990s (Fefelov *et al.* 2001); migrants arrive in early May (Mel'nikov 2000a, Fefelov *et al.* 2001) and depart by early September (Zhuravlev *et al.* 1991, Mel'nikov 2000a, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004), exceptionally as late as early October (Mel'nikov 2000a). **SEB:** rare breeder, migrates along Selenga River late August–end September (Vasil'chenko 1987). **Assessment:** Uncommon local breeder, uncommon spring and autumn migrant. **Remarks:** This species breeds in forest marshes in the mountains surrounding LB (e.g. Vasil'chenko 1987, Bogorodskiy 1989).

Solitary Snipe *Gallinago solitaria*

NWB: pairs recorded at Pokoynyy Cape on 27 May 1995 and 18 August 1998 (Popov *et al.* 2002). **MM:** young

male collected in Sarma Delta on 4 October 1995 (Pyzh'yanov *et al.* 1997). **SWB:** recorded at Kultuk (Taczanowski 1893). **Assessment:** Rare visitor. **Remarks:** Solitary Snipe is known to breed rarely in the alpine belt of mountains surrounding LB (Vasil'chenko 1982, 1987, Ananin and Fedorov 1988, Unzhakov 1988, Olovyannikova 2000, Popov *et al.* 2002, Ernst 2003). **Taxonomy:** Birds from LB are usually included in the subspecies *solitaria* (e.g. Gladkov 1951, Dickinson 2003, Stepanyan 2003), but museum skins indicate that Siberian birds should be separated as *Gallinago (solitaria) hyemalis*, a name proposed by Eversmann (1845) (Mlíkovský unpublished data). Note that Solitary Snipes use to overwinter around southern LB and in adjacent parts of Mongolia (e.g. Molleson 1896, Dorogostayskiy 1912, Gladkov 1951, Bold 1973, Sum'yaa and Skryabin 1989, Popov 1993m).

Asian Dowitcher *Limnodromus semipalmatus*

Near Threatened. **NWB:** 2–4 seen at Tyya Delta on 4 June 2005 (Hellström 2005). **VAD:** four recorded on 25 May 1976, three birds showing breeding behaviour recorded at Severobaykal'skiy Lake on 24 June 1977 and a pair observed there on 24 June 1978 (Tolchin *et al.* 1979). **MM:** recorded in Sarma Delta in autumn 1983 (Pyzh'yanov *et al.* 1997, 1998). **SNI:** recorded in 1961 (Skryabin 1967b), recorded breeding (Zhuravlev *et al.* 1986); adults and juveniles observed at Kedrovka in July–August 1991; breeding of a few pairs considered probable (Heyrovský *et al.* 1992); four nests found in marshes at Kedrovka on 7 June–7 July 1993 (MŠ); 11 seen near Barmashevyye Lakes on 12 August 1993 (JM); four seen on 11 August and one on 15 August 1994 at Kedrovka (PS); recorded breeding (Pyzh'yanov *et al.* 1998), ten seen on 9 June 1998 in marshes at Kedrovka (PS). **SD:** breeding considered possible in early 1960s (Shvetsov and Shvetsova 1967), first proven when nests found in 1973 (Tolchin 1974, Tolchin and Mel'nikov 1977, Tolchin *et al.* 1977, 1979); population estimated at 300 pairs in 1970s (Mel'nikov 1979b, 1985a, 1986, 1988b, 1990b, Vasil'chenko 1987; see also Mel'nikov 1990a, 1994), slightly over 100 breeding individuals in 1991 (Mel'nikov 1998b), 18–300 breeding individuals in 1988–1996 (Fefelov *et al.* 2001), and a few dozen pairs in 2002 (Tupitsyn and Fefelov 2003). SD supported up to 4,500 breeding individuals in 1977–1978, when breeding sites south of LB dried out (Mel'nikov 1998b,e). Migrants arrive from early May and usually depart by mid-August, although some remain until September (Tolchin *et al.* 1977, Tupitsyn and Podkovyrov 1990, Zhuravlev *et al.* 1991, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004; see also Vasil'chenko and Prokop'yev 1988g, Mel'nikov 1997c, Liedel 2001, and Schuster and Handke 2001). **Notes:** Turov (1923a) recorded Asian Dowitcher in northern LB, without specifying a locality. A nest found in 1977 at Shigayevo (SD) and attributed to Asian Dowitcher (Vasil'chenko and Unzhakov 1982) did not belong to this species, but probably to a Ruff (Faunisticheskaya Komissiya po Kulikam 1992). **Assessment:** Uncommon to common breeder in large wetlands, with breeding records starting in 1960s (SD), 1970s (VAD), and 1990s (SNI). Numbers breeding varied significantly between years. Uncommon to common spring and autumn migrant. The numbers of migrants correlate with the numbers breeding (I. Fefelov *in litt.* 2008). The Selenga Delta is the most important breeding site for this species in the world. **Taxonomy:** For morphometric data on birds from LB see Mel'nikov *et al.* (1987b, 2000).

Long-billed Dowitcher *Limnodromus scolopaceus*

MM: a juvenile female observed and collected at Sakhyurta on 21–22 September 1987 (Pyzh'yanov 1989, Pyzh'yanov *et al.* 1997, 1998, Mel'nikov 1998f; specimen in Irkutsk University). **Assessment:** Vagrant.

Eurasian Woodcock *Scolopax rusticola*

NWB: one collected at Malaya Kosa Cape on 15 May 1959; two collected at Zavorotnyy Cape on 5 July 1959 (O. Gusev in Popov *et al.* 2002), migrants recorded at Bol'shoy Solontsovyy Cape on 27–29 May 1990, 19 July 1992 and 8 September 1992, and in Zavorotnaya Bay on 15 May 1992, 26 September 1992 and 25 July 1994 (Popov *et al.* 2002). **NEB:** two adult males collected at Sosnovka on 5 and 25 June 1915 (Shtegman 1936); recorded at Davsha Bay in early May 1957 (O. Gusev in Ustinov 1963); recorded on migration on LB shores at Yazovka River on 5 June 1959, and at Bol'shaya Delta in spring 1958 and/or 1959 (Ustinov 1963); rare on LB shore in Barguzinskiy Reserve (Belyaev 1982). **MM:** repeated summer records on Ol'khon Island (Litvinov and Gagina 1977). **UI:** recorded on autumn migration (Yumov 1990, Matveychuk 1991). **SNI:** spring migration started on 10–13 May in 1957 (Ustinov 1963). **SWB:** pulli found at Marituy village on 13 July 1979 (Bogorodskiy 1989); migration along LB coasts peaks after mid-August (Bogorodskiy 1989); one seen on 3 August 1990 at a brook near Polovinnaya (PS). **SD:** said to be common breeder in 1955–1962 (Shvetsov and Shvetsova 1967), but this is probably based on summer records of non-breeding individuals (Fefelov *et al.* 2001); a displaying male recorded on 13 May 1980 (Zhuravlev *et al.* 1991, Mel'nikov 2000a, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004); very few summer records, breeding assumed in upper part of SD but not confirmed (Mel'nikov 2000a, Fefelov and Tupitsyn 2004). **SEB:** two males recorded displaying at Vydrino on 31 May 2008 (Holmstedt 2008); three individuals recorded at Bol'shoy Mamay on 5 June 2008 (Hellström 2008). **Assessment:** Rare visitor. **Remarks:** Eurasian Woodcock breeds in taiga belts of mountain chains surrounding LB (Belyaev 1982, Vasil'chenko 1987, Ananin and Fedorov 1988, Bogorodskiy 1989, Mel'nikov 1999d; see also Ustinov 1963).

Black-tailed Godwit *Limosa limosa*

Near Threatened. **NWB:** one seen at Tyya Delta on 6 June 1991 (Olsson 1991). **VAD:** common on spring and autumn migration in early 1970s, arriving on 18–20 May (Tolchin *et al.* 1977); rare breeder (Tolchin *et al.* 1979); two displaying individuals seen on 5 June 2005 west of Kichera (Hellström 2005). **NEB:** recorded in 1914 and/or 1915 (Doppel'mayr 1926). **MM:** recorded in Sarma Delta on 8 August 1976, 3 August 1977 and 12 August 1978 (Bogorodskiy 1989); one recorded in Sarma Delta in July–August 2002 and two recorded there in August 2003 (Anthes *et al.* 2004); recorded on Ol'khon Island on 28 August 1959 (Litvinov and Gagina 1977); recorded several times on Ol'khon (Bogorodskiy 1989). **UI:** vagrant (Matveychuk 1991). **SNI:** ten observed on an unspecified date and three recorded on 8 August 1922 (Turov 1923);

a pair seen in late July 1930 (Shtegman 1936); recorded on autumn migration (Gagina 1960a); observed repeatedly at Kedrovka 30 July–14 August 1991 (Heyrovský *et al.* 1992); three seen right of the Barguzin River where it enters Barguzinskiy Bay on 29 July 1993, one seen near Barmashevyye Lakes on 30 July 1993, and recorded at Kovrizhka on 14 July 1994 (JM); recorded at Kopeshka on 3 August 1994 (JM, PS). **SWB:** rare at Kultuk on spring migration from mid-May [= late May NS] in spring, not recorded in autumn (Taczanowski 1873, 1893). **SD:** common breeder (Shvetsov and Shvetsova 1967, Tolchin and Mel'nikov 1974, Vasil'chenko 1987, Zhuravlev *et al.* 1991, Fefelov *et al.* 2001, Fefelov and Baskakov 2001, Fefelov and Tupitsyn 2004, Groen *et al.* 2006); migrants arrive from early May and depart by mid-September (Tolchin *et al.* 1977, Zhuravlev *et al.* 1991, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **Note:** See also Mel'nikov and Tolchin (1993c). **Assessment:** Common breeder in SD, rare breeder in VAD. Common spring and autumn migrant. **Taxonomy:** Birds from LB are generally assigned to the subspecies *melanuroides* (e.g. Gladkov 1951, Dickinson 2003, Stepanyan 2003, Doblik *et al.* 2006). However, V. Tolchin (in Tomkovich and Serra 1999) suggested that *limosa* and *melanuroides* are in contact at LB and that they probably interbreed there, without presenting supporting evidence. Fefelov *et al.* (2001) considered birds from SD to be intermediate between the two, but examination of further specimens led Fefelov *et al.* (2003) to consider these birds typical *melanuroides* (see also Groen *et al.* 2006). The latter form was elevated to species rank by Höglund *et al.* (2009) and Brazil (2009).

Bar-tailed Godwit *Limosa lapponica*
MM: an adult male seen in Sarma Delta on 19–20 July 2002, and two adults seen there on 14 August 2003 (Anthes *et al.* 2004). **SD:** reported (Gagina 1961), but record doubted by Tolchin *et al.* (1977). Another record by Lipin *et al.* (1973) was subsequently withdrawn as a misidentified Asian Dowitcher (Mel'nikov 2000a, S. Lipin in Fefelov *et al.* 2001, S. Lipin in Fefelov and Tupitsyn 2004). **Assessment:** Vagrant.

Little Curlew *Numenius minutus*
NWB: collected at Pokoynaya Bay on 9 August 1959 and in Zavorotnaya Bay on 12 and 14 August 1959 (O. Gusev in Popov *et al.* 2002); two recorded at Pokoynyy Cape on 10 August 1995, four seen at Pokoynyy Cape on 15–16 August 1995, nine birds in three flocks seen at Pokoynyy Cape on 28 July 1996; two birds seen at Pokoynyy Cape on 26 May 1997, a flock of five birds seen at Pokoynyy Cape on 27 May 1997; common on migration on LB shores within the Baykalo-Lenskiy Reserve during 30 July–29 August 1998 (Olovyannikova 1998, 2000b, Popov *et al.* 2002). **VAD:** a single spring record at Dagary (Pyzh'yanov *et al.* 1997); common in inland delta of Verkhnyaya Angara on autumn migration north of LB (Tolchin *et al.* 1979). **NEB:** in Barguzinskiy Reserve recorded only on migration in August (Turov 1923, 1924a, Skryabin and Filonov 1962, Belyaev 1984, Ananin 1986). **MM:** a flock of eight recorded at Kocherikova on 11–12 August 1971 (Tolchin *et al.* 1977); recorded in Sarma Delta on 13 August 1976 and 12 August 1977 (Bogorodskiy 1989); regularly recorded in Sarma Delta in late 1970s, but no records after 1980 (Pyzh'yanov *et al.* 1997); recorded on Ol'khon Island on 10 August 1958 (Litvinov and Gagina 1977, Bogorodskiy 1989). **SNI:** two observed flying above Kedrovka on 23 August 1991 (PS in Heyrovský *et al.* 1992), three seen on 28 July 1993 right of the Barguzin River where it enters Barguzinskiy Bay (JM); three seen at Kopeshka on 2 August 1994 (JM, PS). **SWB:** recorded at Kultuk (Dybowski and Godlewski 1870, Taczanowski 1893); recorded at Goloustnaya Delta on 14 August 1975 (Bogorodskiy 1989). **SD:** a flock of six seen at Masaikha Channel on 12 August 1975 (Mel'nikov 2000a); recorded in Adunovskaya Channel on 1 August 1986 and 28 August 1987 (Zhuravlev *et al.* 1991); three observed in Adunovskaya Channel on 3 July 1993 (Fefelov *et al.* 2001); rare on autumn migration with records during late July–late August (Zhuravlev *et al.* 1991, Tupitsyn and Fefelov 1995a, Pyzh'yanov *et al.* 1998, Mel'nikov 2000a, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **Assessment:** Rare spring and uncommon autumn migrant. **Remarks:** The nearest breeding locations are in mountain valleys in Irkutsk Province and Buryatia west and north-east of LB, respectively (Tolchin 1983b, Ryabtsev 1993, I. Fefelov *in litt.* 2008). **Taxonomy:** Listed as a subspecies of Eskimo Curlew *N. borealis* by some Russian authors (e.g. Gladkov 1951).

Whimbrel *Numenius phaeopus*
Pre-1850: said to be widespread (Georgi 1775), but this observation apparently applied to all *Numenius* spp., which Georgi (1775) did not discriminate between. **NWB:** one seen at Tyya Delta on 10 June 2008 (Bray *et al.* 2008). **MM:** recorded on Ol'khon Island on 28 July 1958 (Litvinov and Gagina 1977); an adult male recorded in Sarma Delta on 22 May 1977 (Bogorodskiy 1989); two seen in Sarma Delta in July–August 2002 and one seen there in August 2003 (Anthes *et al.* 2003). **SWB:** rare August migrant at Kultuk (Dybowski and Godlewski 1870). **SD:** one collected on 13 September 1956 (Izmaylov and Borovitskaya 1973, Tolchin *et al.* 1977); a flock of five seen in lower part of SD on 31 August 1981 and one seen at Pershikha Channel on 28 August 1986 (Zhuravlev *et al.* 1991); one collected on 15 September 1988 (Mel'nikov 2000a); recorded repeatedly in small numbers on migration mid-August–mid-September in 1986–1994 (Zhuravlev *et al.* 1991, Mel'nikov 2000a, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004); spring records limited to two individuals observed at Posol'skiy Lake on 22 May 1988 and one observed at Khirel'da Channel on 31 May 1991 (Fefelov *et al.* 2001); one seen at Galutay Channel on 10 June 2002 (Fefelov *et al.* 2003); at least three seen at Istomino on 29–31 May 2008 (Holmstedt 2008); singles seen at Alimasovo on 2 and 6 June 2008 (Hellström 2008). **Assessment:** Rare spring and autumn migrant. **Taxonomy:** Birds from LB were traditionally included in East Siberian subspecies *variegatus* (e.g. Gladkov 1951, Stepanyan 2003), but Fefelov and Tupitsyn (2004) suggested that individuals of subspecies *phaeopus* (which breeds west of the Yenisey River) may also occur in SD, while Tomkovich (2008) indicated birds recorded at LB may belong to the Central Siberian subspecies *rogachevae*.

[Slender-billed Curlew *Numenius tenuirostris*
Critically Endangered. **SNI:** one reportedly observed at Svyatoy Nos isthmus in 1993 (Dorzhiyev 1993, Ryabtsev 1997), attributed to 'a group of Czech ornithologists

headed by Jiří Mlíkovský'. However, this is an error: we did not see any Slender-billed Curlews at Svyatoy Nos isthmus or elsewhere in Buryatia. **Remarks:** Based on a few other reports of Slender-billed Curlew in the wider vicinity of LB, Ryabtsev (1997) suggested that a breeding population of this species may exist at SNI and/or in the Barguzinskaya Valley, but this is highly improbable. Not listed by Inskipp *et al.* (1996).]

Eurasian Curlew *Numenius arquata*
Near Threatened. **NWB:** singles recorded at Bol'shoy Solontsovyy Cape on 7–8 July 1991, and at Pokoynyy Cape on 15 August 1995, 1 August 1996 and 11 May 1998; a flock of four seen at Rytyy Cape on 6 September 1989 (Popov *et al.* 2002); seen at Tyya Delta on 10 June 2008 (Bray *et al.* 2008). **VAD:** recorded in summer (Turov 1924a); bred in early 1970s (Tolchin *et al.* 1977); regularly encountered between Nizhneangarsk and Kichera on 4–7 June 1991 (Olsson 1991); common in June 2005 at Nizhneangarsk and Tipuki (Hellström 2005). **NEB:** recorded in summer in Barguzinskiy Reserve (Belyaev 1982); recorded on migration (Ananin and Fedorov 1988). **MM:** recorded in Sarma Delta on 25 August 1963 and 23 August 1974 (Bogorodskiy 1989); up to five recorded in Sarma Delta in July–August 2002 (Anthes *et al.* 2004). **UI:** vagrant (Yumov 1990, Matveychuk 1991). **SNI:** recorded in summer 1930 (Shtegman 1936); recorded in summer (Gagina 1960a); breeds (Turov 1923, Malyshev 1960b); not recorded on autumn migration (Skryabin and Filonov 1962); common breeder in 1991–1994 and 2001 (Heyrovský *et al.* 1992, JM, PS); 1–2 pairs recorded in Bol'shoy Chivyrkuy Delta, 16–19 June 2001 (JM). **SWB:** rather common on migration at Kultuk, starting in late April [= around 10 May NS] in spring, and during August–mid-September [= mid-August–late September NS] in autumn (Taczanowski 1893); recorded at Kultuk in August 1959; a flock of 16–20 recorded in Goloustnaya Delta on 18–19 August 1974 (Bogorodskiy 1989). **SD:** rare breeder in late 1950s–1970s (Shvetsov and Shvetsova 1967, Tolchin *et al.* 1977, Mel'nikov 1998b); common breeder since 1980s (Zhuravlev *et al.* 1991, Mel'nikov 1998b, Fefelov *et al.* 2001); population estimated at 10–20 pairs in 1970s, and up to 70 pairs in 1980s (Mel'nikov 1998b); migrants arrive late April–mid-May and depart by mid-September (Tolchin *et al.* 1977, Zhuravlev *et al.* 1991, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **Assessment:** Common breeder in large wetlands (VAD, SNI, SD), occasional breeder elsewhere. Breeding population increased in SD in 1980s. Common spring and autumn migrant. **Taxonomy:** Birds breeding at LB belong to the eastern subspecies *orientalis* (Gladkov 1951, Stepanyan 2003).

Eastern Curlew *Numenius madagascariensis*
NWB: one seen at Severobaykal'sk on 8 June 1994 (Pyzh'yanov *et al.* 1997). **MM:** a male recorded on 6 August 1976, and one collected in Sarma Delta on 22 August 1976 (Pyzh'yanov *et al.* 1979, Bogorodskiy 1989, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004); three seen in Sarma Delta in July–August 2002 (Anthes *et al.* 2004). **SNI:** one observed flying above Kedrovka on 25 August 1991 (PS in Heyrovský *et al.* 1992); one seen flying in southern Chivyrkuyskiy Bay on 1 July 1993 (MŠ); one seen flying over marshes at Kedrovka on 26 August 1994 (JM); one flying near Ust'-Barguzin on 1 August 1994 (PS); one seen flying over marshes at Kedrovka on 27 August 1994 (JM, TS). **SWB:** recorded on migration at Kultuk (Dybowski and Godlewski 1870, Taczanowski 1873, 1877, 1893); a male and female collected at Kultuk on 29 August [= 10 September NS] 1869 (Taczanowski 1871b); a female collected at Kultuk on 1 [= 13 NS] June 1870 (Taczanowski 1871a). **SD:** first recorded on 16 August 1980 (Zhuravlev *et al.* 1991, Mel'nikov 2000a); said to be recorded repeatedly in late August–early September (Zhuravlev *et al.* 1991), but Fefelov *et al.* (2001) and Fefelov and Tupitsyn (2004) cited records only in Adunovskaya Channel on 26 August 1986, Shigayevo on 7 July 1989 and 17 July 1992, and Khirel'da Channel on 30 July 2001. **Assessment:** Rare autumn migrant. **Remarks:** Nearest breeding sites appear to be in Chara and Muya valleys east of LB (Tolchin and Pyzh'yanov 1979, Tolchin *et al.* 1979).

Spotted Redshank *Tringa erythropus*
NWB: a specimen collected in Zavorotnaya Bay on 31 July 1959 (O. Gusev in Popov *et al.* 2002). **VAD:** uncommon spring and common autumn migrant (Tolchin *et al.* 1977). **NEB:** adult male collected at Sosnovka on 16 August 1914 (Shtegman 1936); rare summer visitor and autumn migrant in Barguzinskiy Reserve (Belyaev 1982, 1984, Ananin and Fedorov 1988). **MM:** recorded on migration mid-August–20 September (Litvinov and Gagina 1977); recorded in Sarma Delta July–August in 2002–2003 (Anthes *et al.* 2004). **SNI:** common on autumn migration (Turov 1923); recorded on migration (Gagina 1960a); recorded on migration late August–early October in 1959–1960 (Skryabin and Filonov 1962); birds in breeding plumage seen on 6–7 July and display calls heard on 6 July 1991, so breeding possible (Heyrovský *et al.* 1992); adults seen at Barmashevyye Lakes on 6 and 7 July 1993 (JM); three seen on 18 August 1994 at Barmashevyye Lakes (PS); recorded at Kedrovka on 5 September and daily on 17–20 September 1994 (JM, PS). **SWB:** recorded on migration (Bogorodskiy 1989). **SD:** breeding assumed (Mel'nikov 1984) because of summer observations (12–29 July 1981 and 15–23 June 1982), but this rejected by Mel'nikov (1998b), who re-interpreted summer birds as early autumn migrants. Rather common spring migrant early May to mid-June (Zhuravlev *et al.* 1991, Fefelov *et al.* 2001), common on autumn migration, peaking late August–late September, while last individuals are recorded into late October (Tolchin *et al.* 1977, Zhuravlev *et al.* 1991, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **Assessment:** Common spring and autumn migrant, occasional breeder.

Common Redshank *Tringa totanus*
VAD: a female with a chick recorded (Skryabin 1967b) but Tolchin *et al.* (1977) doubted this because Skryabin's field notebook revealed uncertainty whether the birds were Common Redshank or Marsh Sandpiper *T. stagnatilis*. **SWB:** recorded on autumn migration (Bogorodskiy 1989). **SD:** rarely recorded, possible breeding asssumed (Shvetsov and Shvetsova 1967); two birds collected at Posol'skiy Lake on 3 October 1972 (Tolchin *et al.* 1977); one and later two birds observed at Chasovenskiy Channel on 22–25 July 1985 (Mel'nikov 1998b); one recorded at Motaikha Channel on 14 June 1996 (Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **Assessment:** Rare visitor.

MARSH SANDPIPER *Tringa stagnatilis*
NWB: at Bol'shoy Solontsovyy Cape a pair recorded on 14 August 1989, a flock of five on 16 August 1989, two on 24 August 1989, and two on 29 May 1990; singles seen at Malyy Solontsovyy Cape on 30 May 1992, Zavorotnaya Bay on 6 August 1992, and Pokoynyy Cape on 20 May 1994 (Popov *et al.* 2002); two seen at Tyya Delta on 6 June 2008 (Bray *et al.* 2008). **VAD:** two males collected on 10 August 1923 (Turov 1924); recorded on Bludnoye Lake (Gagina 1962b); breeds (Tolchin 1974, Tolchin *et al.* 1977); regularly encountered between Nizhneangarsk and Kichera on 4–8 June 1991 (Olsson 1991); 17 seen at Tipuki on 6 June 2005 (Hellström 2005). **NEB:** recorded rarely in Barguzinskiy Reserve on migration during 9–15 May and 2 August–20 September (Belyaev 1980, 1982, Ananin and Fedorov 1988). **MM:** 'a few' diplaying pairs seen in Sarma Delta in June 1976, with chicks observed there on 22 June 1976; arrives in spring in mid-May, rare on autumn migration, with a record from Ol'khon Island on 9 September 1976 (Pyzh'yanov *et al.* 1979); rare sightings in Sarma Delta in July–August 2002 and August 2003 (Anthes *et al.* 2004). **SNI:** a male collected at Kulinoye, specimen in Davsha (Barguzinskiy Reserve headquarters) (Skryabin 1960); recorded only on migration (Gagina 1960a); one collected at Arangatuy Lake on 22 May 1955 (Gagina 1962b); recorded breeding (Tolchin 1976b, Tolchin *et al.* 1979); breeds in Chivyrkuyskiy Bay (Vasil'chenko 1987), uncommon breeder in marshes at Lake Arangatuy in 1991 (Heyrovský *et al.* 1992); four nests found in marshes at Kedrovka on 6–16 June 1993 (MŠ); recorded at Barmashevyye Lakes on 6–7 July 1993 and 16–17 June 1994 (JM, PS); one seen at Kovrizhka on 16 July 1994 and recorded at Kopeshka on 3 August 1994 (JM); a juvenile seen on 15 August 1994 at Kedrovka (PS), five individuals seen on 18 August 1994 at Barmashevyye Lakes and three seen on 20 June 2001 in marshes at the southern end of Chivyrkuyskiy Bay (PS); recorded at Ust'-Barguzin on 28 June 2001 and 14 July 2005 (JM). **SWB:** breeding confirmed at Anga Delta in June 1983 (Bogorodskiy 1989); four seen at Bol'shaya Rechka on 13 June 1988 (SOF 1988); nine seen at Bol'shaya Rechka on 7 June 1989 (SOF 1989), ten there on 2 June and c.13 on 9 June 1991 (Olsson 1991). **SD:** common breeder in 1940s–1970s (Bakutin 1950, Shvetsov and Shvetsova 1967, Tolchin *et al.* 1977); population size increased in late 1970s (Mel'nikov 1998b, Fefelov *et al.* 2001, Fefelov and Baskakov 2001); spring migration peaks on 5–17 May, autumn migration ends in late September (Zhuravlev *et al.* 1991, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **Assessment:** Until the 1970s the species bred only in SD, but since then the population has increased and spread north. Currently a widespread breeder and common spring and autumn migrant.

COMMON GREENSHANK *Tringa nebularia*
NWB: seven collected during 9–29 August in years 1958 and 1959 at Bol'shoy Solontsovyy, Malyy Solontsovyy, Pokoynyy, Zavorotnyy and Malaya Kosa Capes (O. Gusev in Popov *et al.* 2002), recorded at Zavorotnyy Cape on 30 and 31 July 1990, Zavorotnaya Bay on 8 August 1990, and Bol'shoy Solontsovyy Cape on 13 August 1990 (Popov *et al.* 2002). **VAD:** recorded breeding and on migration in early 1970s (Tolchin *et al.* 1977); regularly encountered between Nizhneangarsk and Kichera on 4–7 June 1991 (Olsson 1991); two seen on 6 June 2005 at Verkhnyaya Zaimka (Hellström 2005). **NEB:** recorded in 1914 and/or 1915 (Doppel'mayr 1926); rare on spring migration in Barguzinskiy Reserve (Belyaev 1982). **MM:** recorded repeatedly in July–September (Litvinov and Gagina 1977); recorded repeatedly in Sarma Delta in July–August 2002 and August 2003 (Anthes *et al.* 2004). **SNI:** recorded repeatedly at Kedrovka on 28 July–14 August 1991 (Heyrovský *et al.* 1992); common at Barmashevyye Lakes on 6 and 7 July 1993 and recorded at Kopeshka on 4 August 1994 (JM); recorded at Kedrovka on 11 and 18 August 1994 (PS) and on 5 September 1994 (JM); ten seen on 18 August 1994 at Barmashevyye Lakes, and six seen on 2 July 1998 at Barguzin river mouth (PS); heard at night in Bol'shoy Chivyrkuy Delta on 16 June 2001 (JM). **SWB:** recorded on migration and breeding (Bogorodskiy 1989). **SD:** recorded on migration in early to late May and mid-July to late September (Zhuravlev *et al.* 1991, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). Breeding records limited to 1981, when several pairs were seen and two chicks caught in central SD between Srednyaya and Kolpinaya Channels (Mel'nikov 1998b). **Assessment:** Occasional breeder, uncommon spring and autumn migrant.

GREEN SANDPIPER *Tringa ochropus*
NWB: common at forest pools and brooks along LB shores (Malyshev 1960a); a flock of seven seen at Bol'shoy Solontsovyy Cape on 14 May 1990, species recorded at Pokoynyy Cape on 20 May 1994 (Popov *et al.* 2002); summer records are limited to Bol'shoy Solontsovyy and Pokoynyy Capes, but breeding not proven (Popov *et al.* 2002); regular autumn migrant until mid-September (Popov *et al.* 2002). **VAD:** common breeder, spring migration recorded on 4–20 May 1973 (Tolchin *et al.* 1977); regularly encountered between Nizhneangarsk and Kichera on 4–7 June 1991 (Olsson 1991). **NEB:** adult male collected at Sosnovka on 18 August 1914 (Shtegman 1936); rare breeder and common migrant in Barguzinskiy Reserve (Belyaev 1982, Ananin and Fedorov 1988). **MM:** common breeder on Ol'khon Island (Litvinov and Gagina 1977); two seen in Sarma Delta in July–August 2002 (Anthes *et al.* 2004). **UI:** vagrant (Galaziy and Molozhnikov 1982, Yumov 1990, Matveychuk 1991). **SNI:** recorded breeding in summer 1930 (Shtegman 1936); recorded breeding (Gagina 1960a), recorded repeatedly in various sites in SNI during July–August 1991 (Heyrovský *et al.* 1992); alarmed behaviour indicated breeding at Zmeinaya Bay on 23 July 1991 (Heyrovský *et al.* 1992); recorded at Bamashovye Lakes on 6–7 July 1993 (JM); two seen at Kedrovka and one at Barmashevyye Lakes on 18 August 1994 (PS). **SWB:** recorded on migration and in summer, but no proof of breeding available (Bogorodskiy 1989). **SEB:** a pair seen on 22 July 1990 at the Turka estuary (PS). **SD:** common breeder 1955–1962 (Shvetsov and Shvetsova 1967); uncommon breeder in early 1970s (Tolchin *et al.* 1977); rarely recorded in summer in 1980s–1990s (Zhuravlev *et al.* 1991, Fefelov *et al.* 2001); uncommon on spring migration (starting in late April) and on autumn migration during late July–mid-September (Tolchin *et al.* 1977, Zhuravlev *et al.* 1991, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **Assessment:** Widespread breeder, uncommon spring and common autumn migrant.

Wood Sandpiper *Tringa glareola*
NWB: 27 individuals collected at Pokoynyy and Bol'shoy Solontsovyy Capes and in Zavorotnaya Bay during 29 July–25 August 1959 (O. Gusev in Popov *et al.* 2002); recorded at Bol'shoy Solontsovyy Cape on 26 May 1992 and at Pokoynyy Cape on 6 June 1992, 20 May 1994 and 19 May 1998 (Popov *et al.* 2002); regularly on autumn migration from second half of July (Popov *et al.* 2002). **VAD:** common breeder (Tolchin *et al.* 1977); regularly encountered between Nizhneangarsk and Kichera on 4–7 June 1991 (Olsson 1991); c.10 individuals seen on 5 June 2005 at Nizhneangarsk (Hellström 2005); common on spring and autumn migration, with first arrivals on 13–17 May (Tolchin 1975, Tolchin *et al.* 1977). **NEB:** adult male collected at Sosnovka on 28 May 1915 (Shtegman 1936); rare breeder and common migrant in Barguzinskiy Reserve (Belyaev 1982, Ananin and Fedorov 1988). **MM:** common breeder on Ol'khon Island (Litvinov and Gagina 1977); common on migration in Sarma Delta in July–August 2002 and August 2003 (Anthes *et al.* 2004). **UI:** recorded breeding (Galaziy and Molozhnikov 1982). **SNI:** recorded breeding (Gagina 1960a); common breeder in early 1970s (Tolchin *et al.* 1977); common breeder (Heyrovský *et al.* 1992); a nest found at Kedrovka on 5 June 1993 and recorded at Barmashevyye Lakes on 6–7 July 1993 (MŠ); a displaying male seen north of Barmashevyye Lakes on 17 June 1994, alarm calls heard at Kovrizhka on 14 July 1994, and recorded in Bol'shoy Chivyrkuy Delta on 16–19 June 2001 (JM); two seen at Kopeshka on 2 August 1994, several seen at Barmashevyye Lakes on 18 August 1994, two seen at the Barguzin estuary on 2 July 1998 and four seen at the southern end of Chivyrkuyskiy Bay on 20 June 2001 (PS); recorded at Kovrizhka on 23 June 2001 and at Ust'-Barguzin on 28 June 2001 (JM); six recorded there on 14–16 July 2001 (PS) and several recorded there on 14 July 2005 (JM). **SWB:** recorded on migration and breeding (Bogorodskiy 1989). **SD:** common breeder in 1960s–1970s (Shvetsov and Shvetsova 1967, Tolchin *et al.* 1977); last nest found on Chayachiy Islet on 4 June 1985 (Fefelov *et al.* 2001); recorded only on migration through late 1980s–1990s (Fefelov *et al.* 2001); uncommon on spring migration from last days of April, most usually arriving 9–16 May, common on autumn migration during late June–late September (Tolchin *et al.* 1977, Zhuravlev *et al.* 1991, Fefelov *et al.* 2001, Mel'nikov 2003, Fefelov and Tupitsyn 2004). **Assessment:** Formerly widespread, now local breeder in SNI. A sharp decline in breeding population since 1970s was observed in SD, which resulted in probable local extirpation (Fefelov *et al.* 2001). Uncommon spring and common autumn migrant.

Terek Sandpiper *Xenus cinereus*
NWB: recorded in 1959 (O. Gusev in Popov *et al.* 2002); one seen in Zavorotnaya Bay on 30 July 1994, one seen at Pokoynyy Cape on 28 August 1995, and three there on 15 August 1998 (Olovyannikova 2000b, Popov *et al.* 2002), two individuals seen on 4 June 2005 at Tyya Delta (Hellström 2005). **VAD:** common on spring migration on 28 May–2 June 1973 (Tolchin *et al.* 1977); two seen at Tuya Delta on 6 June 1991 (Olsson 1991). **NEB:** recorded at Kudalda Delta on 22 August 1922 (Turov 1923); rare on spring migration in Barguzinskiy Reserve (Belyaev 1982, Ananin and Fedorov 1988). **MM:** recorded on Ol'khon Island in early August 1917, on 30 June 1933, in early August 1959, and on 4 September 1973 (Litvinov and Gagina 1977); recorded at Polovinnyy Cape and in Sarma Delta during 2–13 August, and a female recorded there on 26 May 1977 (Bogorodskiy 1989); regularly recorded in Sarma Delta in small numbers July–August 2002 and in August 2003 (Anthes *et al.* 2004). **SNI:** two adult males and two adult females collected at Ust'-Barguzin on 22 July 1930 (Shtegman 1936); common breeder (Gagina 1960a); recorded on autumn migration during 30 July–22 August (Skryabin and Filonov 1962); one observed at Kedrovka on 8 August 1991 and 13 August 1991 (T. Koutný in Heyrovský *et al.* 1992); at least five observed on the southernmost Barmashevoye Lake on 21 August 1991 (JM in Heyrovský *et al.* 1992); two seen near Barmashevyye Lakes on 12 August 1993 (JM); one seen at Kedrovka on 5 September 1994 (JM, PS). Shtegman's (1936) record was interpreted as a proof of breeding by himself and Gagina (1960a, 1961), but Tolchin *et al.* (1977) correctly doubted this. **SWB:** three seen at Bol'shaya Rechka on 2 June 1987 (Svensson and Hedgren 1987). **SD:** not recorded on spring migration (Zhuravlev *et al.* 1991, Fefelov *et al.* 2001); rare in summer: one recorded in Galutay Channel on 10 June 1989, calls heard in Khirel'da Channel on 4 June 1992, and recorded in central SD on 7 July 1988 and on 14 July 1990 (Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004); regularly encountered on autumn migration 19 July–8 September (Zhuravlev *et al.* 1991, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **Assessment:** Uncommon spring and autumn migrant. **Taxonomy:** Often listed as *Terekia cinerea* in earlier Russian literature.

Common Sandpiper *Actitis hypoleucos*
NWB: commonly recorded 1958–1959, and a nest found in Zavorotnaya Bay (O. Gusev in Popov 2002); common breeder and migrant, recorded as late as 1 September (Popov *et al.* 2002). **VAD:** common breeder (Tolchin *et al.* 1977); regularly encountered between Nizhneangarsk and Kichera on 4–8 June 1991 (Olsson 1991); common at Baykal'skoye and at Tyya Delta on 4 June 2005 (Hellström 2005). **NEB:** adult female collected at Sosnovka on 18 August 1914 (Shtegman 1936); uncommon spring migrant, common in summer and on autumn migration in Barguzinskiy Reserve (Belyaev 1982). **MM:** common breeder on Ol'khon Island (Litvinov and Gagina 1977); common in Sarma Delta on migration in July 2002, rare there on migration in August of both 2002 and 2003 (Anthes *et al.* 2004). **UI:** a nest found on Bol'shoy Ushkan'i Island on 27 June 1957, with the local breeding population estimated at several pairs (Gusev 1960a); common breeder on all four main islands (Yumov 1990); common breeder on Dolgoy Island, common visitor to other islands (Matveychuk 1991). **SNI:** common breeder (Gagina 1960a); common at the Barmashevyye Lakes and along the shores of Barguzinskiy and Chivyrkuyskiy Bays in July–August 1991 (Heyrovský *et al.* 1992) and in June–August 1993 (JM); two seen in the Zmeinnaya Bay on 10 August 1993 (JM); recorded at Kopeshka on 4 August 1994 (JM, PS); two seen in Bol'shaya Cheremshana Delta on 13–15 June 1998 (PS); recorded at Barmashevyye Lakes on 12–13 June 2001 and at the south-eastern corner of Chivyrkuyskiy Bay on 21 June 2001 (JM). **SWB:** recorded at Polovinnaya River breeding in June 1973 and on autumn migration in

August–September (Bogorodskiy 1989); common on LB shores between Kultuk and Port Baykal on 1–5 August 1990 (PS). **SEB:** two seen at the Turka estuary on 22 July 1990 (PS). **SD:** common breeder in late 1950s–early 1960s (Shvetsov and Shvetsova 1967); rare breeder during 1970s–1990s (Tolchin *et al.* 1977, Zhuravlev *et al.* 1991, Fefelov *et al.* 2001); spring arrival from 6 May, autumn migration mid-July–mid-September (Zhuravlev *et al.* 1991, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **Assessment:** Widespread though uncommon breeder, common spring and autumn migrant.

Grey-tailed Tattler *Heteroscelus brevipes*
NWB: single specimens collected in Zavorotnaya Bay on 1 May 1959 and 5 May 1959, Pokoynyy Cape on 9 August 1959, Malyy Solontsovyy Cape on 19 August 1959, Malaya Kosa Cape on 22 August 1959, and at Muzhinay Cape on 22 August 1959 (O. Gusev in Popov *et al.* 2002); three seen at Tyya Delta on 6 June 1991 (Olsson 1991); recorded in Zavorotnaya Bay during 20–30 July 1993 and 30–31 July 1994 (Popov *et al.* 2002); eight recorded at Baykal'skoye on 4 June 2005, 35 at Tyya Delta on 4 June and two there on 9 June (Hellström 2005); at least five seen at Tyya Delta on 6 and 10 June 2008 (Bray *et al.* 2008). **VAD:** uncommon on spring and rare on autumn migration (Tolchin *et al.* 1977); one seen on Yarki Island on 5–6 June 1991 (Olsson 1991); ten seen at Yarki Island on 5 June 2005 (Hellström 2005). **NEB:** rare on spring migration in Barguzinskiy Reserve (Belyaev 1982, Ananin and Fedorov 1988). **MM:** recorded on Ol'khon Island on 19 June 1957, 2 June 1973 and 6 June 1973 (Litvinov and Gagina 1977); common in Sarma Delta on migration during July–August 2002 and August 2003 (Anthes *et al.* 2004). **UI:** one collected on 21 July 1917 (Vorob'yev 1927); a flock of six observed on 14–26 June 1979 (Yumov 1990); recorded as a vagrant (Matveychuk 1991). **SNI:** recorded on autumn migration (Gagina 1960a); one observed in Chivyrkuyskiy Bay near Zmeinaya Bay on 23 July 1991 (D. Heyrovský in Heyrovský *et al.* 1992); recorded in Barguzinskiy Bay at Kedrovka on 6 June 1993 (JM, MŠ, PS); one seen on 28 July 1993 where the Barguzin River enters Barguzinskiy Bay (JM). **SWB:** recorded at Goloustnaya and Sarma Deltas in May–August (Bogorodskiy 1989); six seen at Bol'shaya Rechka on 2 June 1987 (Svensson and Hedgren 1987). **SD:** recorded on spring migration early–late May (Mel'nikov 2000a); recorded on Kokuy Island on 4 June 1986 and 6 June 1988 (Zhuravlev *et al.* 1991, Fefelov *et al.* 2001); recorded in Khirel'da Channel on 31 May 1991 and 1 June 1991, and at Posol'skoye on 30 May–10 June in years 1987–1988 (Fefelov *et al.* 2001); a flock of 22 observed in the Novyy Peremoy Channel on 1 June 1994 (Fefelov *et al.* 2001); regularly recorded on autumn migration late June–late September (Tolchin *et al.* 1977, Mel'nikov 2000a, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004); at least 30 seen on LB shores west of Istomino on 29 May 2008 (Holmstedt 2008); a few seen at Alimasovo on 2–4 June 2008 (Hellström 2008). **Assessment:** Rare spring and autumn migrant. **Taxonomy:** Treated as a subspecies of Wandering Tattler *Heteroscelus incanus* (sometimes under the name *Tringa incana*) by some Russian authors.

Ruddy Turnstone *Arenaria interpres*
NWB: one collected at Bol'shaya Kosa Cape on 4 September 1958 (O. Gusev in Popov *et al.* 2002); one seen at Pokoynyy Cape on 4 October 1999 (Olovyannikova 2000b, Popov *et al.* 2002). **VAD:** rare spring and common autumn migrant (Tolchin *et al.* 1977); four observed on Yarki Island on 6 June 1991 (Olsson 1991). **NEB:** rare autumn migrant (Ananin and Fedorov 1988). **MM:** rare in Sarma Delta and on Ol'khon Island in late summer and early autumn (Litvinov and Gagina 1977); recorded in Sarma Delta on 23 August 1976 (Bogorodskiy 1989); a few recorded in Sarma Delta during July–August 2002 and August 2003 (Anthes *et al.* 2004). **SNI:** two collected on 25 August 1913 (Keve 1948); recorded in autumn (Gagina 1960a); one seen at Kedrovka on 25 August 1991 (PS in Heyrovský *et al.* 1992); one seen at Kopeshka on 6 August 1994 (PS). **SWB:** uncommon on migration at Kultuk (Dybowski and Godlewski 1870, Taczanowski 1873, 1893); one seen at Bol'shaya Rechka on 2 June 1987 (Svensson and Hedgren 1987). **SD:** uncommon, but regular migrant in spring during 30 May–6 June (singly or in flocks up to 140 individuals) and in autumn up to mid-September, one observed at Militseyskaya Channel on 12 July 1986 (Tolchin *et al.* 1977, Zhuravlev *et al.* 1991, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **Assessment:** Rare spring and uncommon autumn migrant.

Red-necked Phalarope *Phalaropus lobatus*
NWB: recorded at Pokoynyy Cape on 19 September 1997 and 9 September 1999 (Olovyannikova 1998, 2000b, Popov *et al.* 2002). **NEB:** one recorded at Tompuda Delta on 9 September with another on 17 September 1958 (Skryabin 1960); one recorded at Davsha on 26 May 1969 (Belyaev 1984). **MM:** one recorded at Khuzhir on Ol'khon Island on 21 September 1973 (Litvinov and Gagina 1977, Bogorodskiy 1989). **SD:** absent in spring and summer, regularly encountered in small numbers on autumn migration during 25 August–19 September (Tolchin *et al.* 1977, Zhuravlev *et al.* 1991, Fefelov *et al.* 2001, Fefelov and Tupitsyn 2004). **Assessment:** Rare autumn migrant with one spring record.

Red Phalarope *Phalaropus fulicarius*
SD: one collected at Bol'shaya Rechka Delta on 3 October 1972 (Tolchin *et al.* 1977). **Assessment:** Vagrant.

Pomarine Jaeger *Stercorarius pomarinus*
VAD: one recorded at Dagary on 28 May 1987 and two seen at Dagary on 8 June 1992 (Pyzh'yanov *et al.* 1997, 1998). **NEB:** one recorded at Frolikha Delta on 16–17 July 1972 (Tolchin *et al.* 1974, Mel'nikov 1998d). **MM:** recorded in Ol'khonskiye Vorota (Pyzh'yanov *et al.* 1998). **SWB:** one seen 20 km south of Ol'khonskiye Vorota on 1 June 1984 (Pyzh'yanov *et al.* 1997, 1998); one observed from 25 January to mid-February 1998 at Angara outflow (Mel'nikov 1998d). **SD:** a juvenile recorded at Posol'skoye on 12 September 1987, and an adult recorded at Galutay Channel on 17 July 1989 (Tupitsyn and Fefelov 1995a, Mel'nikov 1998d, Fefelov *et al.* 2001). **Assessment:** Vagrant.

Parasitic Jaeger *Stercorarius parasiticus*
NEB: one seen flying at Valukan Cape on 10 August 1991 (Ananin 1995). **Assessment:** Vagrant. **Remarks:** One was collected also at Troitskosavsk [= Kyakhta], south-east of LB, in April 1909 (Kozlova 1930).

Pallas's Gull *Larus ichthyaetus*
SD: two observed at Klyuchikha Bay on 27 May 1989 and one observed at the estuary of Severnaya Channel on 8 June 1991 (Mel'nikov 2000a). **Assessment:** Vagrant.

Relict Gull *Larus relictus*
Vulnerable. **SD:** a flock of 30 observed in Krivaya Channel on 11 July 1977 and two observed in Khirel'da Channel on 4 June 1979 (Mel'nikov 2000a); one seen flying at Alimasovo Lake on 21 July 2002 (I. Tupitsyn in Fefelov *et al.* 2003). **Assessment:** Vagrant.

Little Gull *Larus minutus*
VAD: common breeder, with population estimated at 100–160 pairs in early 1970s (Sadkov 1977b, Shkatulova 1980); arrives in spring 18–26 May, departs in autumn mostly by mid-August (Sadkov 1977); regularly encountered between Nizhneangarsk and Kichera on 4–8 June 1991 (Olsson 1991). **NEB:** adult male collected at Sosnovka on 15 August 1914 (Shtegman 1936); singles on 26 and 30 May 1974 at Sosnovka Delta, with three there on 20 September 1973 (Belyaev 1980). **MM:** regular migrant 15 May–11 June and 12–26 August (Pyzh'yanov *et al.* 1979). **UI:** rare summer visitor, regular autumn migrant (Yumov 1990); vagrant (Matveychuk 1991). **SNI:** not recorded in summer 1930 (Shtegman 1936); rare breeder (Gagina 1960a); a colony of 10–12 pairs found at Arangatuy Lake in 1979 was first confirmation of breeding in SNI (Yegorov 1980); uncommon breeder (Skryabin *et al.* 1989a); at least ten pairs bred in marshes at Lake Arangatuy in 1991 (Heyrovský *et al.* 1992); c.30 pairs bred in marshes at Kedrovka in June 1993 (MŠ); several seen north of Barmashevyye Lakes on 17 June 1994 (PS). **SWB:** rare visitor at Kultuk (Taczanowski 1873, 1893). **SD:** a juvenile collected in June 1964 and breeding considered probable (Bogorodskiy 1976); first breeding colonies found in 1975 (Skryabin *et al.* 1977; see also Skryabin 1977a,b, Skryabin and Razmakhnina 1978, 1979); population estimated at 1,000–1,500 breeding birds in 1977–1982 when water level low (Mel'nikov 1984b) with markedly fewer in 1983–1986 when water level high (Tupitsyn 1991); two colonies with 65 breeding individuals in 1987 (Tupitsyn 1991); 15 colonies with 420 breeding individuals counted in 1992 (Tupitsyn 1979, Fefelov *et al.* 2001); spring arrival starts mid-May, autumn departure ends mid-August (Fefelov *et al.* 2001). **Assessment:** Uncommon breeder in large wetlands (VAD, SNI, SD), uncommon spring and autumn migrant elsewhere. There is no evidence that Little Gulls bred at LB before 1960s. **Remarks:** Little Gulls migrate from LB west-south-west towards Central Asia (Pyzh'yanov 1998b).

Black-headed Gull *Larus ridibundus*
NWB: recorded at Pokoynyy Cape on 20 May 1994 (Popov *et al.* 2002). **VAD:** common breeder with population estimated at 500–600 pairs in early 1970s; birds arrive in first half of May, and most depart between late July and mid-August (Sadkov 1977b); common in June 2005 (Hellström 2005). **NEB:** recorded at Khakusy and at Ayaya and Frolikha Deltas (Sadkov 1977a,b). **MM:** recorded in Sarma Delta on 6 August 1977 and 14 August 1978 (Bogorodskiy 1989); rare on migration on Ol'khon Island (Litvinov and Gagina 1977); a few individuals recorded in Sarma Delta in July–August 2002 and August 2003 (Anthes *et al.* 2004). **SNI:** large colony found at Arangatuy Lake in 1961 (Skryabin and Filonov 1962); common breeder in marshes at Arangatuy Lake in 1991 (Heyrovský *et al.* 1992); common on 3 June–1 September 1993 and in June 2001, c.20 pairs counted in Bol'shoy Chivyrkuy Delta on 16–19 June 2001 (JM). **SWB:** recorded at Kultuk (Taczanowski 1893). **SD:** not recorded in 1930s–1940s (Bakutin 1950); common breeder in late 1950s (Shvetsov and Shvetsova 1967) and 1970s (Gilevich 1977a,b); 10,700 breeding individuals estimated in 1982, 4,600 in 1985 (Mel'nikov 1988a) and 8,700 in 1990 (Tupitsyn 1991), with low water levels correlating with larger numbers (Tupitsyn 1999, Fefelov *et al.* 2001); spring arrival mostly around mid-April, most leaving SD by end of August, although some stay until end of September (Gilevich 1977a, Skryabin and Razmakhnina 1978, Fefelov *et al.* 2001). **Assessment:** Common breeder in large wetlands (VAD, SNI, SD), common spring and autumn migrant elsewhere. **Remarks:** Most migrate south-east in winter, but some ringed individuals have been recorded in Central Europe (Pyzh'yanov 1998b).

Slender-billed Gull *Larus genei*
SD: an adult male was collected at Srednyaya Channel on 15 June 1989 (Tupitsyn and Fefelov 1995a,b; specimen in Irkutsk University). **Assessment:** Vagrant. **Remarks:** Other records close to southern LB include singles seen at Angarsk on 12 June 1991 (Popov and Salovarov 2000) and at Beloye Lake on 20 June 2001 (Tebb and Ranner 2002). A male Slender-billed Gull successfully bred with a female Black-headed Gull in Irskutsk in May–June 2003 (Fefelov 2004, Fefelov and Tupitsyn 2004).

Mew Gull *Larus canus*
Pre-1850: common throughout LB, but in smaller numbers than Yellow-legged Gull (Georgi 1775). **NWB:** common at Kotel'nikovskiy Cape in August 1930 (Shtegman 1936); recorded at Pokoynyy Cape on 20 May 1994 and 28 April 1998, a flock of 25–30 seen in Zavorotnaya Bay in 1994, and a few seen at Malyy Solontsovyy Cape on 28–30 July 1994 (Popov *et al.* 2002). **VAD:** breeds (Skryabin 1977a,b, Skryabin *et al.* 1989a); population size estimated at 44–78 pairs in 1970s (Skryabin 1977a); arrives in spring in mid-May–early June (Skryabin 1977a). **NEB:** recorded in 1914 and/or 1915 (Doppel'mayr 1926). **MM:** said to breed on Ol'khon Island in 1930 (Shtegman 1936); later considered a rare visitor there July–September (Litvinov and Gagina 1977); a few seen in Sarma Delta in July–August 2002 and August 2003 (Anthes *et al.* 2004). **UI:** c.20 seen on 28 June 1957 near Bol'shoy Ushkan'i Island, no breeding recorded (Gusev 1960a); common summer visitor (Yumov 1990, Matveychuk 1991). **SNI:** breeds at Arangatuy Lake (Gusev 1960a, Skryabin and Filonov 1962, Skryabin 1977a,b); recorded breeding on Chayachiy, Pogranichnyy and Kaltygey [= Golyy] islets in Chivyrkuyskiy Bay in 1955 and 1957 (Gusev 1960b); population estimated at 30 pairs in 1955 (Gusev 1960b), 29 pairs in 1969 and 23 pairs in 1976 (Skryabin 1977a), and 90 pairs in late 1970s (Yegorov 1980); observed repeatedly in July–August 1991, but without signs of breeding (Heyrovský *et al.* 1992); seen repeatedly in marshes on Svyatoy Nos isthmus in June–August 1993 (JM, MŠ, PS) and in June–August 1994 (JM); seen at Barmashevyye Lakes on 12 June 2001 and in marshes in south-eastern corner of Chivyrkuyskiy

Bay on 20–21 June 2001 (JM). **SWB:** recorded at Kultuk on spring migration from late April or early May [= mid-May NS], and in autumn in very large flocks, with immatures oversummering (Taczanowski 1873, 1893); regular non-breeding visitor in SWB: recorded at Polovinnyy Cape and Goloustnaya Delta, common at Port Baykal (Bogorodskiy 1989). **SD:** common breeder, population size varying from 1,200 to 3,300 pairs (Tupitsyn 1991, 1995, 1999; see also Tupitsyn *et al.* 1994a,b); arrives in mid-April and leaves in early November when ice covers the water (Skryabin 1977, Skryabin and Razmakhnina 1978, Fefelov *et al.* 2001). **Note:** Common throughout LB in summer 1855 (Radde 1861b). See also Skryabin (1995a, 1999). **Assessment:** Common breeder in large wetlands (VAD, SNI, SD), common spring and autumn migrant elsewhere. **Taxonomy:** LB birds are usually included in the subspecies *heinei* (e.g. Dement'yev 1951, Vaurie 1965, Dickinson 2003, Stepanyan 2003). However, intergrades between the western *heinei* and eastern *kamtschatschensis* are said to occur in eastern Siberia, and the border between the ranges of these two taxa is imperfectly known (see Yudin and Firsova 2002), so further study is needed.

YELLOW-LEGGED GULL *Larus cachinnans*

Pre-1850: common throughout LB (Georgi 1775). **NWB:** common spring, summer and autumn visitor (Popov *et al.* 2002); first breeding (one pair) recorded on shingle in Zavorotnaya Bay in 1998 (Popov and Stepantsova 1999), and breeding at this site has continued subsequently (N. Stepantsova in Popov *et al.* 2002); another nest found at Malyy Solontsovyy Cape on 6 June 1999 (Popov and Stepantsova 1999). **VAD:** not recorded breeding in 1930 (Shtegman 1936); common breeder, with c.217–240 pairs in mid-1970s (Skryabin 1977a) and c.360 pairs in 1980s (Skryabin *et al.* 1991); most arrive in mid-April (Skryabin *et al.* 1991) or late April–early May (Gusev 1960). **NEB:** recorded in 1914 and/or 1915 (Doppel'mayr 1926). **MM:** common breeder, including on Ol'khon Island in 1930 (Shtegman 1936); c.350 pairs in early 1970s on islets of Borgadagan, Borakchin [= Ol'trek] and Kharantsy (Starikov 1974); c.450–870 pairs in mid-1970s on islets of Izhilkhey, Borgadagan, Shargodagan, Khubyn, Khunuk, Bol'shoy Toynak and Yedor (Skryabin 1977a); c.2,000 pairs on islands in 1980s (Skryabin *et al.* 1991; see also Skryabin and Safronov 1988); c.1,100–1,200 pairs on Bol'shoy Toynak and Khunuk islets in 2002–2003 (Anthes *et al.* 2004); most arrive in early April (Skryabin *et al.* 1991, Pyzh'yanov 2000b) or in second half of April (Skryabin 1977a), and most leave in September (Pyzh'yanov 2000b); does not breed on Ol'khon, but frequently visits (Litvinov and Gagina 1977). **UI:** common summer visitor (Yumov 1990, Matveychuk 1991). **SNI:** small colonies found at Arangatuy Lake with 41 pairs in 1957 (Gusev 1960b) and 20 pairs in 1961 (Skryabin and Filonov 1962); breeds on islets in Chivyrkuyskiy Bay: 250 pairs on Kaltygey [= Golyy] and 60–90 pairs on Belyy Kamen' in 1957 (Gusev 1960b); c.150–170 pairs on Golyy, Lokhmatyy and Kameshek-Bezymyannyy islets in early 1970s (Starikov 1974); 900 pairs on Malyy Kaltygey islet and 150 pairs on Baklaniy islet in mid-1970s (Yegorov 1980); 363 pairs in 1977 (Pyzh'yanov 1987); c.450 pairs in mid-1980s (Skryabin *et al.* 1991); 496 pairs in 1985 (Pyzh'yanov 1987); bred also on Kameshek-Bezymyannyy in late 1950s (Gusev 1960b), Belyy Kamen' (Malyshev 1960b) and Chayachiy Islet (Skryabin and Filonov 1962); breeding colony on Kaltygey [= Golyy] Islet in 1991 (A. Reiter in Heyrovský *et al.* 1992); several dozen pairs on Golyy Islet on 13 July 1993 (JM); c.200 pairs on Golyy Islet on 16 June 2001 (JM, PS); an isolated nest found in marshes at Kedrovka on 7 June 1993 (MŠ); common in SNI in June 2001 (JM, PS); non-breeding individuals recorded in Bol'shoy Chivyrkuy Delta on 16–19 June 2001 (JM, PS); migrants arrive in second half of April (Yegorov 1980). **SWB:** common breeder on cliffs near Baklaniy Kamen' in 1855 (Radde 1861b: 214); common breeder in 1860s (Polyakov 1869); recorded at Kultuk on migration in similar numbers to Mew Gull (Taczanowski 1873, 1893); common at southermost end of LB on 5 June 1909 (Jones 1909); a breeding colony on a cliff at Khabartuy Cape existed until 1962 (Bogorodskiy 1989); now only one colony at Sharyzhalgay Cape: 20–25 pairs in 1968 (Starikov 1974); population size increased from 60–70 pairs in 1978–1979 (Belozerov and Bogorodskiy 1979, Pyzh'yanov 1977, Bogorodskiy 1981) to 150 pairs in 1985 (Pyzh'yanov *et al.* 1989); arrival at Sharyzhalgay Cape in first ten days of April (Bogorodskiy 1989); colony of c.100 pairs at Orso Cape in early 1970s (Starikov 1974) and c.10–15 pairs in 1980s (Skryabin *et al.* 1991); c.10–15 pairs at Shagan-Zoba Cape in 1980s (Skryabin *et al.* 1991). **SD:** common breeder, population of c.1,500–3,000 pairs in 1977–late 1990s (Mel'nikov 1984a, Pyzh'yanov *et al.* 1989, Skryabin *et al.* 1991, Fefelov *et al.* 2001); arrives in spring in late March–early April (Gusev 1960b, Skryabin and Razmakhnina 1978, Skryabin *et al.* 1991, Tupitsyn 1999, Fefelov *et al.* 2001); most migrants depart mid-August–mid-September, although a few stay until late October (Skryabin and Razmakhnina 1978, Fefelov *et al.* 2001). **SEB:** numerous colonies at Proval Bay were flooded by Irkutsk Dam in late 1950s (Starikov 1974). **Note:** Total numbers at LB were c.3,300 pairs in 1977, 4,460 pairs in 1985, and 7,200–7,800 pairs in 1995 (Pyzh'yanov 1987, 1996, Pyzh'yanov *et al.* 1989, Pyzh'yanov and Tupitsyn 1998; see also Skryabin 1977a). The breeding colony on Chayachiy Islet was submerged when the Irkutsk Dam raised water level in LB (see Molozhnikov 1974). **Assessment:** Widespread common breeder, common spring and autumn migrant. **Remarks:** Birds migrate from LB along the Amur, reaching Sakhalin by September and wintering in Korea and China (Skryabin *et al.* 1991, Pyzh'yanov 1996, 1998b, 2000b). **Taxonomy:** Within the *Larus argentatus–cachinnans–fuscus*-complex, populations inhabiting Mongolia and adjacent parts of Asia represent a well-defined form, *mongolicus* (e.g. Sushkin 1925, Yésou 2001, Yudin and Firsova 2002; for morphometric data see Skryabin and Sharoglazov 1974 and Pyzh'yanov and Tupitsyn 1992; for molecular data see e.g. Liebers 2001, 2004). This form has been traditionally included in *argentatus*, but has been recently considered a subspecies of *cachinnans* (e.g. Inskipp *et al.* 1996, Yudin and Firsova 2002, Dickinson 2003, Stepanyan 2003, Koblik *et al.* 2006), *vegae* or *smithsonianus* (e.g. Sangster *et al.* 2007, Collinson *et al.* 2008), or a full species (e.g. Yésou 2001, Brazil 2009). Usually listed in Russian literature as *L. argentatus*, or less frequently as *L. cachinnans*.

GLAUCOUS GULL *Larus hyperboreus*

VAD: collected on 13 August 1855 (Radde 1861b: 114, 1863, Gagina 1960b, 1962a, identity confirmed by

Shtegman 1936); two recorded in May (Tolchin *et al.* 1974; year not given); a juvenile observed for several days from 26 May 1976; single juveniles recorded on 9 June and 9 September 1976 (Sadkov 1977); recorded repeatedly (Pyzh'yanov *et al.* 1997, 1998). **NEB:** a specimen collected at Sosnovka on 13 October 1957 (Gagina 1960a,b, 1962). **MM:** singles recorded on Yedor Islet on 9 June 1977, Peschanka village on Ol'khon Island on 6 June 1978, and Khunyk Islet on 24 July 1978 (Pyzh'yanov *et al.* 1979); recorded repeatedly (Pyzh'yanov *et al.* 1997, 1998). **SWB:** vagrant at Kultuk (Dybowski and Godlewski 1870). **SD:** a juvenile recorded at Posol'skiy Lake in September 1972 (A. Gilevich in Sadkov 1977); singles recorded on 11 June 1977 and 22 July 1981 (Mel'nikov 1998a—this source is incorrectly cited by Fefelov *et al.* 2001); one collected at Galutay Channel on 12 May 1984 (V. Zhuravlev and V. Podkovyrov in Fefelov *et al.* 2001); one immature observed on an islet in Kharay-Irimskaya Bay on 2 July 1994 (Fefelov *et al.* 2001). **Note:** One collected in southern LB on 8 June 1971 (Tolchin *et al.* 1974; locality not given). **Assessment:** Rare visitor.

Ivory Gull *Pagophila eburnea*

Near Threatened. **NWB:** one seen in a flock of Mew Gulls at Pokoyniki on 30 May 1998 (Olovyannikova 1999, Popov *et al.* 2002). **NEB:** one recorded at Bol'shaya Delta on 13 July 1992 (Ananin 1995). **Assessment:** Vagrant. **Remarks:** Not listed by Inskipp *et al.* (1996).

Black-legged Kittiwake *Rissa tridactyla*

NEB: a juvenile collected at Sosnovka on 22 September 1940 (Gagina 1960a, 1962a, Vasil'chenko 1982). **SEB:** repeatedly observed on LB shores in Baykal'skiy Reserve mid-September–20 October 1976, with flocks numbering up to 50 individuals (Vasil'chenko 1982); an injured female found at Mishikha Delta on 19 November 1976 (Vasil'chenko 1982, 1987). **Assessment:** Vagrant.

Gull-billed Tern *Gelochelidon nilotica*

SD: several juveniles seen and one collected in July–August 1964 (Bogorodskiy 1976); a juvenile collected in Khirel'da Channel on 22 July 1973; an adult and a weakly flying juvenile observed in Galutay Channel on 12 August 1979, breeding assumed (Mel'nikov 2000a). **Assessment:** Rare visitor, exceptional breeding in SD is probable.

Caspian Tern *Sterna caspia*

NWB: single birds seen in Zavorotnaya Bay on 21 June 1996 and 5 July 1998, and a few individuals regularly observed in Pokoynaya Bay in June–July in late 1990s (Olovyannikova 2000b, Popov *et al.* 2002); two seen at Tyya Delta on 9 June 2005 (Hellström 2005). **VAD:** first recorded in July–August 1972 (Tolchin *et al.* 1974); regularly recorded in subsequent years (Sadkov 1977b, Tolchin *et al.* 1979); probable breeding recorded in 1977 (Tolchin *et al.* 1979); four seen on Yarki Island on 5 June 2005 (Hellström 2005); one seen at Zaimka River on 9 June 2008 (Bray *et al.* 2008). **NEB:** recorded on migration (Ananin and Fedorov 1988). **MM:** one recorded on Bol'shoy Toynak Islet in 1933 (Gagina 1961) or 1934 (Gagina 1958b); four recorded in 1975–1978 (Pyzh'yanov *et al.* 1979); up to 22 seen in Sarma Delta in July–August 2002 (Anthes *et al.* 2004). **SNI:** one recorded in Barguzinskiy Bay near Kedrovka on 2 August 1991 (JM in Heyrovský *et al.* 1992); four seen above Barguzin River in Ust'-Barguzin on 21 August 1991 (T. Koutný in Heyrovský *et al.* 1992); two seen in Barguzin Bay at Kedrovka on 26 June 1993 (JM); one seen in southern Chivyrkuyskiy Bay on 1 July 1993 (MŠ) and three seen there on 5 July 1993 (JM); eight seen at Ust'-Barguzin on 14 July 2005 (JM, PS). **SWB:** one seen flying at Kultuk on 8 May 1995 (PS). **SEB:** one seen on LB shores between Gremyachinsk and Turka on 3 June 1993 (JM). **SD:** first records in 1974, first three breeding colonies found at Krivaya Channel in 1977 (Mel'nikov 1979a, 1998b); population varies from c.350 to 800 adults (Mel'nikov 1979a, 1998b, Tupitsyn 1991, Fefelov *et al.* 2001); breeding since 1977 in Kharay-Irim Channel; breeding on Karga-Bab'ya Island, 1988–1993 (Fefelov and Baskakov 2001); spring arrival in late April, autumn departure before mid-August, last individual seen on 20 September (Mel'nikov 1979a, Fefelov *et al.* 2001). **Assessment:** Common breeder in SD from mid-1970s, uncommon visitor elsewhere. **Taxonomy:** Often listed as *Hydroprogne tschegrava* in Russian literature.

Common Tern *Sterna hirundo*

Pre-1850: common (Georgi 1775). **NWB:** one observed in Zavorotnaya Bay for two weeks in late August 1996, four seen and a nest found in Zavorotnaya Bay in June 1997, one and two birds recorded there on 28 May and 4 June 1998, respectively, but no signs of breeding observed (Olovyannikova 1998, Popov *et al.* 2002); regularly seen in very small numbers on autumn migration in 1990s (Olovyannikova 1998). **VAD:** recorded in 1855 (Radde 1863 under *S. macrura*); common breeder, spring arrival in late May–early June (Mel'nikov and Sadkov 1977, Sadkov 1977a). **NEB:** adult male collected at Sosnovka on 15 August 1914 (Shtegman 1936). **MM:** uncommon summer visitor to Ol'khon Island (Litvinov and Gagina 1977); recorded in Sarma Delta on 13 August 1978, 22 August 1961 and 1 September 1961 (Bogorodskiy 1989); breeds in Sarma Delta since 1982, and also bred in 1998 on Bol'shoy Toynak islet and on a nearby unnamed rock (Pyzh'yanov 1999); common in Sarma Delta in July–August 2002 and August 2003 (Anthes *et al.* 2004). **UI:** one recorded on 18 July 1979 (Yumov 1990). **SNI:** common breeder (Gusev 1960a, Gagina 1960b, Mel'nikov and Sadkov 1977); breeding recorded at Arangatuy Lake in 1978, with c.70 pairs there in 1979 (Yegorov 1980); common breeder in 1991 (Heyrovský *et al.* 1992), and 1993 (JM, PS); recorded at Barmashevyye Lakes on 12 June 2001 (JM, PS); 2–4 pairs recorded in the Bol'shoy Chivyrkuy Delta on 16–19 June 2001 (JM, PS); a few pairs recorded at Ust'-Barguzin on 28 June 2001 and on 14 July 2005 (JM, PS). **SWB:** recorded at Kultuk (Taczanowski 1873, 1893); breeding recorded at Anga Delta in 1983 (Bogorodskiy 1989); two recorded at Goloustnaya Delta on 19 August 1974 and one there on 10 August 1981 (Bogorodskiy 1989). **SD:** common breeder, population varies from c.120 to 1,770 adults (Mel'nikov 1988a, Fefelov *et al.* 2001); spring arrival around mid-May, most leaving SD by mid-September, but a few stay until mid-October (Mel'nikov and Sadkov 1977, Skryabin and Razmakhnina 1978, Fefelov *et al.* 2001). **Assessment:** Widespread and common breeder, common spring and autumn migrant. **Taxonomy:** Dement'yev (1951b) and others (e.g. Vaurie 1965, Dickinson 2003, Stepanyan 2003, Koblik *et al.* 2006) assigned LB birds to the subspecies *minussensis*, which

they considered an intergrade between the western lighter-coloured, red-billed *hirundo*, and the eastern darker-coloured, black-billed *longipennis*. However, all of several hundred individuals I observed in SNI in 1991–2005 had black bills, and Fefelov *et al.* (2001) made the same observation in SD. Hence, Common Terns breeding at LB seem to be pure *longipennis*.

Little Tern *Sterna albifrons*
SWB: one seen at Bol'shaya Rechka on 7 June 1989 (SOF 1989). **SD:** one recorded on 11 June 1977, five recorded in 1977, and two on 3 June 1978 (Mel'nikov 1979a); a nest found at Galunchika Channel in June 1979 (Mel'nikov 2000a); regularly observed until 1982 (Mel'nikov 2000a); a probable hybrid with *S. hirundo* found on 8 June 1978, and mixed pairs with *S. hirundo* reported (Ochagov 1982, Mel'nikov 1985b). Not encountered after 1982 (Fefelov *et al.* 2001). **Assessment:** Rare visitor, bred in small numbers in SD in 1970s.

Whiskered Tern *Chlidonias hybridus*
NWB or VAD or NEB: a flock of five birds seen, of which one collected (Pyzh'yanov *et al.* 1997, 1998). **MM:** recorded in early 1980s (Skryabin and Pyzh'yanov 1987). **SNI:** a few individuals recorded at Ust'-Barguzin on 3 June 1993 (JM); migrants seen regularly at Kedrovka in June 1993 (JM, MŠ, PS), e.g. 11 on 13 June 1993 (JM), c.65 on 16 June 1993 (MŠ), and c.50 on 22 June 1993 (JM); a nest found in marshes at Kedrovka on 27 June 1993 (MŠ); several individuals seen at Barmashevyye Lakes on 17–18 June 1994 (PS); several seen at Kedrovka on 19–20 July 1994 and one seen at Kopeshka on 3 August 1994 (JM). **SWB:** Not recorded, but said to occur occasionally because observed at Irkutsk in 1987 and 1993, and these birds were believed to be stragglers from SD population (Mel'nikov 2001c). **SD:** recorded in 1973 (Mel'nikov 1998j); first recorded breeding in 1974 (Mel'nikov 1979a, 1988a, 1998b); maximum counts were c.450 pairs in 1979 and c.200 pairs in 1991 (Mel'nikov 1998a,b,h,j, Fefelov *et al.* 2001), but fewer than 10 pairs in 1981–1982 (Mel'nikov 1988a, 1998j); arrives during late May–early June, most leaving by mid-August, although some may stay until mid-September (Skryabin and Razmakhnina 1978, Mel'nikov 1979a, 1998j, Fefelov *et al.* 2001). **Assessment:** Uncommon breeder in SD since 1970s, uncommon visitor elsewhere. **Remarks:** Range expansion in LB region is supported by data from Khubsugul Lake, north-western Mongolia, where it also started to breed in 1970s (Sum'yaa and Skryabin 1989). **Taxonomy:** Birds breeding at LB belong to the eastern Asian subspecies *javanicus* (Zubakin 1988, Mel'nikov 1998j, Fefelov and Baskakov 2001, Stepanyan 2003).

Black Tern *Chlidonias niger*
SD: recorded on spring migration in 1960s (Izmaylov and Borovitskaya 1973), single pairs recorded in 1974–1978 (Mel'nikov 1988a, 1989, 1998b, 2000a, Mel'nikov and Pronkevich 1991a); not recorded after 1979 (Mel'nikov 1998b, 2000a, Fefelov *et al.* 2001); one seen at Istomino on 29 May 2008 (Holmstedt 2008). **Assessment:** Rare visitor, occasional breeder in 1970s (SD). **Remarks:** Nearest breeding is in Irkut valley near Irkutsk west of LB, where small numbers have bred since 1983 (Bogorodskiy 1989, Mel'nikov 1989).

White-winged Tern *Chlidonias leucopterus*
VAD: recorded breeding (Skryabin 1967a); common breeder, arrives in spring on 22–25 May (Mel'nikov 1977); rather common at Nizhneangarsk on 4–8 June 1991 (Olsson 1991); two seen north of Yarki Island on 5 June 2005 (Hellström 2005). **NWB:** a flock of six flew south at Davsha village on 16 September 1976 (Belyaev 1980); rare migrant (Ananin and Fedorov 1988). **MM:** uncommon spring migrant on 20 May–25 June (Pyzh'yanov *et al.* 1979); up to four recorded in Sarma Delta in mid-July 2002 and common there on migration in mid-August 2003 (Anthes *et al.* 2004). **SNI:** recorded breeding (Skryabin 1967a); common breeder in 1991 (Heyrovský *et al.* 1992), 1993 and 1994 (JM, PS); several hundred seen at Ust'-Barguzin on 3 June 1993 (PS); last individuals left marshes at Kedrovka on 18 August in 1994 (JM); 15–20 seen at the Barguzin estuary on 2 July 1998 and abundant in marshes at Kedrovka on 9 June 1998 (PS). **SWB:** recorded at Kultuk (Taczanowski 1893); recorded at Bol'shaya Rechka on 2 June 1987 and at Listvyanka on 3 June 1987 (Svensson and Hedgren 1987). **SD:** recorded on spring migration in 1960s (Izmaylov and Borovitskaya 1973); recorded breeding (Skryabin 1967a); rare breeder in 1974–1978 (Mel'nikov 1975, 1977, 1988a, 1989, 1998a, 2000a); common breeder, numbers varying between 1,000 and 20,000 pairs depending on water levels (Mel'nikov 1998a,h, Tupitsyn 1991, Fefelov *et al.* 2001); arrives in spring mostly on 16–21 May (Mel'nikov 1977), most leaving by mid-August (Fefelov *et al.* 2001). **Assessment:** Common breeder in large wetlands (VAD, SNI, SD), uncommon visitor elsewhere. No evidence that the species bred at LB prior to 1960s.

DISCUSSION

Overall, 61 waterbird species have been recorded as breeding at LB, of which 11 were recorded historically or occasionally and no longer do so. This indicates that the composition of the waterbird fauna of LB is less stable, which agrees with previous studies on the local avifauna (Dorzhiyev and Yelayev 1995b, Fefelov 1998b, 1999b, 2000a, 2003b, Dorzhiyev 2000; see also Gagina 1962c,d, Litvinov 1980b). During the twentieth century alone, four waterbird species disappeared as breeders from LB, 15 started to breed at LB, and two started and ceased to breed at LB. First (**F**) and last (**L**) appearance dates for these species are as follows:

1921–1930:	**F** – Grey Heron;
1931–1940:	**L** – Greylag Goose;
1941–1960:	**F** – Northern Lapwing;
1951–1960:	**F** – Spot-billed Duck;
1961–1970:	**F** – Smew, Asian Dowitcher, Little Gull, White-winged Tern; **L** – Great Cormorant (resumed breeding the 2000s);
1961–1980:	**F** – Black-necked Grebe;
1971–1980:	**F** – Great Crested Grebe, Red-necked Grebe, Falcated Duck, Long-toed Stint, Ruff, Caspian Tern, Little Tern, Whiskered Tern, Black Tern; **L** – Swan Goose, Little Tern, Black Tern;
1991–2000:	**F** – Jack Snipe.

The rate of faunal turnover seems to have been highest during the 1960s–1970s, when the figures were 3, 13 and 2 for extirpated, newcoming and short-term breeders, respectively. The reasons for this turnover are unclear, but it cannot be explained by better ornithological knowledge of LB alone. Even if inconspicuous (e.g. Long-toed Stint) or locally occurring (e.g. Jack Snipe) species could have been overlooked by ornithologists, many other species are conspicuous and easy to identify.

The reasons for these changes and for changing numbers in many waterbird species are unclear. Artificial water level fluctuations caused by the Irkutsk Dam since the 1950s are often mentioned in this respect (Skryabin 1965, 1967a, Skryabin and Tolchin 1975, Lipin *et al.* 1976, Skryabin and Sadkov 1977, Podkovyrov and Shinkarenko 1979, Mel'nikov 1981a, 1982a, Mel'nikov *et al.* 1984b, Podkovyrov 1986b, Kozhova and Pavlov 1995, Fefelov 1996, 1999c), but water levels already markedly fluctuated in LB prior to the construction of this dam (Galaziy 1967, 1972). In addition, overhunting and various agricultural activities are most often mentioned as factors negatively influencing local waterbird populations (e.g. Adamtsevich 1975, Mel'nikova and Klimenko 1979, Mel'nikov *et al.* 1983a, 1984a, Podkovyrov and Podkovyrov 1986, Podkovyrov and Shinkarenko 1986, Skryabin *et al.* 1989b, Mel'nikov 1990c, 1998a, Sadkov 1995, Fefelov 1995, 1999b, Podkovyrov 1997, 1998, Fefelov *et al.* 1998, 1999c, Pyzh'yanov and Podkovyrov 1999). Recently, the impact of global climate change has been added to these adverse factors (Fefelov 2003b). However, direct relationships between these factors and the disappearance or appearance of waterbird species have not been shown.

Most waterbird species breeding in and/or regularly migrating through LB are not of conservation concern (see BirdLife International 2008 for their conservation status). Only two species are considered Vulnerable (Swan Goose and Baikal Teal), both of which have occurred only as vagrants at LB since the 1970s. Four species are listed as Near Threatened, of which Falcated Duck has occurred at LB only as vagrant since the 1970s, Black-tailed Godwit and Eurasian Curlew have been common breeders at LB since the start of ornithological observations, and Asian Dowitcher, now a locally common breeder at LB, spread there in the 1960s. The Selenga Delta currently seems to be the most important breeding site for this species, although an exact assessment of its importance is difficult because numbers of breeding pairs are imperfectly known outside of the delta, and numbers of breeding pairs are known to vary considerably between years within a site.

Although avifaunistic research at LB has a long tradition, the local waterbird fauna is still insufficiently known. Most research has focused on easily accessible parts of extensive wetlands in large river deltas. On the other hand, the interior parts of marshes, remote wetlands (especially those in the Verkhnaya Angara Delta), and small wetlands at estuaries of small rivers and brooks are still less explored. Hence, more research is needed to map the breeding and non-breeding distribution of waterbird species at LB, to assess their status, and to understand their population dynamics. Overall, 137 waterbird species have been recorded at LB since 1800, of which breeding was proved for 61 species, while the remaining 76 species occur at LB only on migration, as rare visitors or as vagrants.

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APPENDIX 1

List of toponyms. Each entry includes the following data: (a) name of the locality transliterated from the Cyrillic original using the transliteration rules of PGN/PCGN 1947; (b) name of the same locality transliterated using the transliteration rules of GOST 1983 (equals UN 1987), and ISO 9:1995 (equals GOST 2000), added in parentheses only if different from the PGN/PCGN style; (c) type of locality; (d) LB segment, see text and Fig. 1 for the definition ('E' stands for extralimital locality); and (e) coordinates in decimal degrees (not given if the locality was not exactly located). The number in brackets before each locality corresponds to the numbered locality on the map.

(1) Abramikha (Abramiha), river, SD, 51.91 106.14; (2) Adunovskaya (Adunovskaja, Adunovskaâ), channel, SD, 52.30 106.80; (3) Alimasovo, settlement, SD, 52.07 106.22; (4) Anga, river, SWB, 52.78 106.55; (5) Angara, river, SWB, 51.88 104.82; (6) Angarakan, Angarakan, channel, VAD, 55.83 110.20; (7) Angarsk, Angarsk, settlement, E, 52.54 103.89; (8) Arangatuy (Arangatuj), lake, SNI, 53.57 109.05; (9) Arul, cape, MM, 53.46 107.54; (10) Baklaniy (Baklanij), islet, SNI, 53.68 109.13; (11) Baklaniy Kamen' (Baklanij Kamen'), islet, SWB, 52.24 105.68; (12) Balandino, settlement, E, 54.67 98.09; (13) Barguzin, river, SNI, 53.42 108.99; (14) Barguzin, settlement, E, 53.62 109.63; (15) Barguzinskiy (Barguzinskij), bay, SNI, 53.45 108.80; (16) Barmashevoye (Barmaševoe), lake, SNI, 53.46 109.01; (17) Barmashevyye (Barmaševye), lakes, SNI, 53.46 109.01; (18) Baykalsk (Bajkalsk), settlement, SEB, 51.52 104.15; (19) Baykal'skiy Priboy (Bajkal'skij Priboj), settlement, SEB, 51.93 106.19; (20) Baykalskoye (Bajkal'skoe), settlement, NWB, 55.37 109.19; (21) Beloye, lake, E, 51.54 107.04; (22) Belyy Kamen' (Belyj Kamen'), islet, SNI, 53.71 109.15; (23) Bludnoye (Bludnoe), lake, VAD, 55.90 109.95; (24) Bol'shaya Kosa (Bol'šaja Kosa, Bol'šaâ Kosa), cape, NWB, 54.77 108.84; (25) Bol'shaya Rechka (Bol'šaja Rečka, Bol'šaâ Rečka), settlement, NEB, 51.95 104.75; (26) Bol'shaya Rechka (Bol'šaja Rečka, Bol'šaâ Rečka), river, NEB, 51.95 104.75; (27) Bol'shaya Rechka (Bol'šaja Rečka, Bol'šaâ Rečka), river, SD, 51.99 106.18; (28) Bol'shiye Koty (Bol'šie Koty), settlement, SWB, 51.90 105.07; (29) Bol'shoy Chivyrkuy (Bol'šoj Čivyrkuj), river, SNI, 53.82 109.22; (30) Bol'shoy Mamay (Bol'šoj Mamaj), river, SEB, 51.51 104.95; (31) Bol'shoy Solontsovyy (Bol'šoj Soloncovyj), cape, NWB, 54.17 108.36; (32) Bol'shoy Toynak (Bol'šoj Tojnak), islet, MM, 53.08 106.84; (33) Bol'shoy Ushkan'i (Bol'šoj Uškan'i), island, UI, 53.85 108.63; (34) Bol'shoye Goloustnoye (Bol'šoe Goloustnoe), settlement, SWB, 52.04 105.41; (35) Borgadagan, islet, MM, 53.16 107.00; (36) Borgoy (Borgoj), settlement, E, 50.74 105.84; (37) Chara (Čara), river, E, 58.77 118.13; (38) Chasovenskiy (Časovenskij), channel, SD, 52.31 106.37; (39) Chasovenskiy (Časovenskij), lake, SD, 52.31 106.37; (40) Chasovenskiye (Časovenskie), lakes, SD, 52.31 106.37; (41) Chayachiy (Čajačij, Čaâčij), islet, SD, 52.13 106.24; (42) Chayachiy (Čajačij, Čaâčij), islet, SNI; (43) Cherkalovskiy (Čerkalovskij), lake, SD, 52.15 106.25; (44) Chivyrkuyskiy (Čivyrkujskij), bay, SNI, 53.62 109.10; (45)

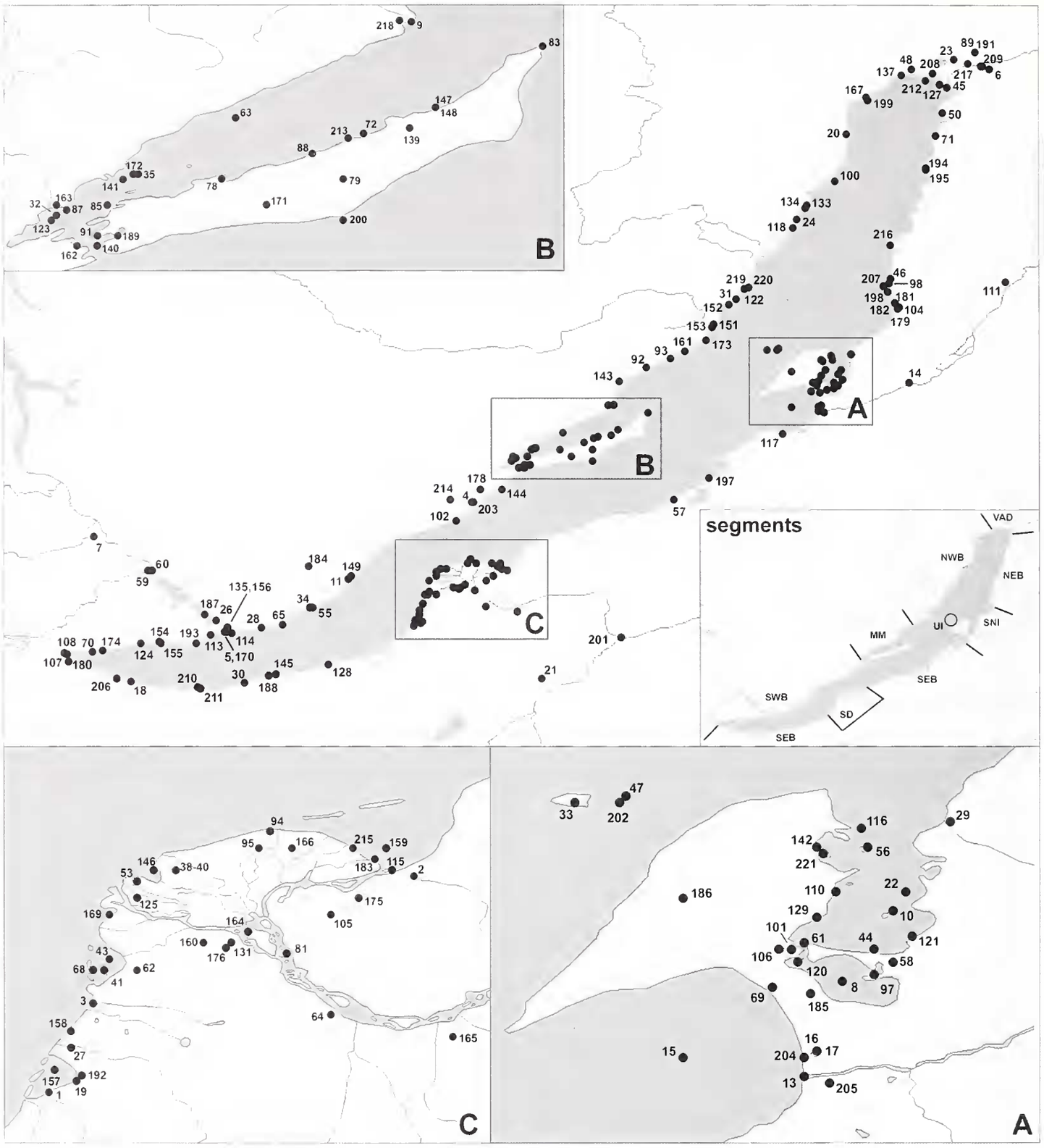

Figure 1. Map of Lake Baikal showing localities mentioned in the text. Numbers of localities correspond to those given in Appendix 1. An inserted map shows segments used in the text. MM – Maloye More; NEB – north-eastern LB; NWB – north-western LB; SD – Selenga Delta; SEB – south-eastern LB; SNI – Svyatoy Nos; SWB – south-western LB; UI – Ushkan'i Islands; VAD – Verkhnaya Angara Delta.

Dagary, settlement, VAD, 55.70 109.90; (46) Davsha (Davša), settlement, NEB, 54.35 109.50; (47) Dolgiy (Dolgij), island, UI, 53.86 108.71; (48) Dushkachan (Duškačan), settlement, VAD, 55.83 109.65; (49) Dushun (Dušun), channel, VAD; (50) Frolikha (Frolicha, Froliha), river, NEB, 55.52 109.87; (51) Galunchika (Galunčika), channel, SD; (52) Galunchiki (Galunčiki), sable, SD; (53) Galutay (Galutaj), channel, SD, 52.29 106.30; (54) Glukhaya (Gluchaja, Gluhaâ), channel, SD; (55) Goloustnaya (Goloustnaja, Goloustnaâ), river, SWB, 52.04 105.43; (56) Golyy (Golyj), islet, SNI, 53.78 109.09; (57) Gremyachinsk (Gremjačinsk, Gremâčinsk), settlement, SEB, 52.80 107.97; (58) Irkana, bay, SNI, 53.64 109.16; (59) Irkut, river, E, 52.30 104.27; (60) Irkutsk, settlement, E, 52.30 104.30; (61) Istok, channel, SNI, 53.63 108.99; (62) Istomino, settlement, SD, 52.13 106.30; (63) Izhilkhey (Ižilchej, Ižilhej), islet, MM, 53.27 107.19; (64) Kabansk, settlement, SD, 52.05 106.65; (65) Kadil'nyy (Kadil'nyj), cape, SWB, 51.92 105.22; (66) Kameshek-Bezymyannyy (Kamešek-Bezymjannyj, Kamešek-Bezymânnyj), islet, SNI; (67) Karbaznoye (Karbaznoe), lake, SD; (68) Karga Bab'ya (Karga Bab'ja, Karga Bab'â), islet, SD, 52.13 106.22; (69) Kedrovka, camping site, SNI, 53.56 108.94; (70) Khabartuy (Chabartuj, Habartuj), cape, SWB, 51.73 103.88; (71) Khakusy (Chakusy, Hakusy), settlement, NEB, 55.36 109.82; (72) Khalgay (Chalgaj, Halgaj), settlement, MM, 53.25 107.53; (73) Khalmetey (Chalmetej, Halmetej), channel, SD; (74) Khalmeteyevskaya (Chalmeteevskaja, Halmeteevskaâ), bay, SD; (75) Khalyun (Chaljun, Halûn), channel, SD; (76) Khamankit (Chamankit, Hamankit), cape, SEB; (77) Khamar-Daban (Chamar-Daban, Hamar-Daban), mountain range, E, 51.30 103–106; (78) Khankhay (Chanchaj, Hanhaj), lake, MM, 53.15 107.17; (79) Kharantsy (Charancy, Harancy), islet, MM, 53.23 107.41; (80) Kharay-Irimskaya (Charaj-Irimskaja, Haraj-Irimskaâ), bay, SD; (81) Khaustik (Chaustik, Haustik), islet, SD, 52.16 106.57; (82) Khirel'da (Chirel'da, Hirel'da), channel, SD; (83) Khoboy (Choboj, Hoboj), cape, MM, 53.41 107.79; (84) Khubsugul (Chubsugul, Hubsugul), lake, E, 51.00 100.50; (85) Khubyn (Chubyn, Hubyn), islet, MM, 53.10 106.94; (86) Khulan-Ushin (Chulan-Ušin, Hulan-Ušin), settlement, MM; (87) Khunuk (Chunuk, Hunuk), islet, MM, 53.09 106.86; (88) Khuzhir (Chužir, Hužir), settlement, MM, 53.20 107.34; (89) Kichera (Kičera), river, VAD, 55.95 110.10; (90) Klyuchikha (Ključčicha, Klûčiha), bay, SD; (91) Kobyl'ya Golova (Kobyl'ja Golova, Kobyl'â Golova), cape, MM, 53.04 106.92; (92) Kocherikova (Kočerikova), settlement, MM, 53.73 107.78; (93) Kocherikovskiy (Kočerikovskij), cape, MM, 53.79 107.95; (94) Kokuy (Kokuj), island, SD, 52.38 106.54; (95) Kolpinnaya (Kolpinnaja, Kolpinnaâ), channel, SD, 52.35 106.52; (96) Kondakovskiy (Kondakovskij), channel, SD; (97) Kopeshka (Kopeška), island, SNI, 53.58 109.10; (98) Kosheli (Košeli), bay, NEB, 54.32 109.49; (99) Kosogol, lake, E, 55.55 89.76; (100) Kotel'nikovskiy (Kotel'nikovskij), cape, NWB, 55.04 109.11; (101) Kovrizhka (Kovrižka), islet, SNI, 53.62 108.97; (102) Krestovskiy (Krestovskij), cape, SWB, 52.65 106.44; (103) Krivaya (Krivaja, Krivaâ), channel, SD; (104) Kudalda, river, NEB, 54.15 109.56; (105) Kudara, settlement, SD, 52.23 106.65; (106) Kulinoye (Kulinoe), lake, SNI, 53.62 108.95; (107) Kultuchnaya (Kultučnaja, Kultučnaâ), river, SWB, 51.71 103.70; (108) Kultuk, settlement, SWB, 51.72 103.68; (109) Kumora, basin, E, 55.89 111.22; (110) Kurbulik, settlement, SNI, 53.71 109.04; (111) Kurumkan, settlement, E, 54.33 110.31; (112) Kyakhta (Kjachta, Kâhta), settlement, E, 50.35 106.45; (113) Listvennichnoe (Listvenničnoe), settlement, SWB, 51.85 104.71; (114) Listvyanka (Listvjanka, Listvânka), settlement, SWB, 51.86 104.86; (115) Lobanovskaya (Lobanovskaja, Lobanovskaâ), channel, SD, 52.31 106.76; (116) Lokhmatyy (Lochmatyj, Lohmatyj), islet, SNI, 53.81 109.08; (117) Maksimikha (Maksimicha, Maksimiha), settlement, SEB, 53.26 108.74; (118) Malaya Kosa (Malaja Kosa, Malaâ Kosa), cape, NWB, 54.71 108.81; (119) Maloye More (Maloe More), region, MM; (120) Malyy Arangatuy (Malyj Arangatuj), lake, SNI, 53.60 108.98; (121) Malyy Chivyrkuy (Malyj Čivyrkuj), river, SNI, 53.60 109.13; (122) Malyy Solontsovyy (Malyj Soloncovyj), cape, NWB, 54.21 108.41; (123) Malyy Toynak (Malyj Tojnak), islet, MM, 53.07 106.83; (124) Marituy (Marituj), settlement, SWB, 51.79 104.22; (125) Masaikha (Masaicha, Masaiha), channel, SD, 52.26 106.30; (126) Militseyskaya (Milicejskaja, Milicejskaâ), channel, SD; (127) Millionnyy (Millionnyj), islet, VAD, 55.72 109.85; (128) Mishikha (Mišicha, Mišiha), river, SEB, 51.64 105.54; (129) Monakhovo (Monachovo, Monahovo), settlement, SNI, 53.67 109.01; (130) Motaikha (Motaicha, Motaiha), channel, SD; (131) Murzino, settlement, SD, 52.18 106.47; (132) Muya (Muja, Muâ), river, E, 56.40 115.65; (133) Muzhinay (Mužinaj), bay, NWB, 54.87 108.91; (134) Muzhinay (Mužinaj), cape, NWB, 54.85 108.90; (135) Nikola, settlement, SWB, 51.90 104.83; (136) Nikulinskaya (Nikulinskaja, Nikulinskaâ), bay, SD; (137) Nizhneangarsk (Nižneangarsk), settlement, VAD, 55.79 109.58; (138) Novyy Peremoy (Novyj Peremoj), channel, SD; (139) Ol'khon (Ol'chon, Ol'hon), island, MM, 53.15 107.40; (140) Ol'khoskiye Vorota (Ol'chonskie Vorota, Ol'honskie Vorota), strait, MM, 53.02 106.92; (141) Ol'trek, islet, MM, 53.16 106.99; (142) Ongokon, river, SNI, 53.78 109.01; (143) Onguren, islet, MM, 53.63 107.59; (144) Orso, cape, SWB, 52.87 106.76; (145) Pereyemnaya (Pereemnaja, Pereemnaâ), river, SEB, 51.57 105.17; (146) Pershikha (Peršicha, Peršiha), channel, SD, 52.31 106.33; (147) Peschanaya (Pesčanaja, Pesčanaâ), bay, MM, 53.29 107.58; (148) Peschanaya (Pesčanaja, Pesčanaâ), settlement, MM, 53.29 107.58; (149) Peschanaya (Pesčanaja, Pesčanaâ), bay, SWB, 52.26 105.70; (150) Pogranichnyy (Pograničnyj), islet, SNI; (151) Pokoynaya (Pokojnaja, Pokojnaâ), bay, NWB, 54.01 108.24; (152) Pokoyniki (Pokojniki), settlement, NWB, 54.03 108.25; (153) Pokoynyy (Pokojnyj), cape, NWB, 54.01 108.24; (154) Polovinnaya (Polovinnaja, Polovinnaâ), river, SWB, 51.80 104.35; (155) Polovinnyy (Polovinnyj), cape, SWB, 51.79 104.36; (156) Port Baykal (Port Bajkal), settlement, SWB, 51.87 104.81; (157) Posol'skiy (Posol'skij), lake, SD, 51.95 106.15; (158) Posol'skoye (Posol'skoe), settlement, SD, 52.02 106.18; (159) Proval, bay, SEB, 52.35 106.75; (160) Ranzhurovo (Ranžurovo), settlement, SD, 52.18 106.42; (161) Rytyy (Rytyj), cape, NWB, 53.84 108.05; (162) Sakhyurta (Sachjurta, Sahûrta), settlement, MM, 53.02 106.88; (163) Sarma, river, MM, 53.10 106.84; (164) Selenga, river, SD, 52.20 106.50; (165) Selenginsk, settlement, SD, 52.01 106.87; (166) Severnaya (Severnaja, Severnaâ), channel, SD, 52.35 106.58; (167) Severobaykal'sk (Severobajkal'sk), settlement, NWB, 55.63 109.33; (168) Shagan-Zoba (Šagan-Zoba), cape, SWB; (169) Shamanka (Šamanka), channel, SD, 52.23 106.25; (170) Shamanskiy Kamen' (Šamanskij Kamen'), islet, SWB, 51.87 104.82; (171) Shara-Nur (Šara-Nur), lake, MM, 53.10 107.25; (172) Shargodagan (Šargodagan), islet, MM, 53.15 106.97; (173) Shartlay (Šartlaj), cape, NWB, 53.92 108.20; (174) Sharyzhalgay (Šaryžalgaj), cape, SWB, 51.74 103.95; (175) Sherashovo (Šerašovo), settlement, SD, 52.26 106.70; (176) Shigayevo (Šigaevo), settlement, SD, 52.17 106.46; (177) Shikhty (Šichty, Šihty), lakes, SD; (178) Shircty (Širety), cape, SWB, 52.87 106.61; (179) Shumilikha (Šumilicha, Šumiliha), river, SEB, 54.14 109.55; (180) Slyudyanka (Sljudjanka, Slûdânka), settlement, SWB, 51.66 103.71; (181) Sosnovka, river, NEB, 54.18 109.53; (182) Sosnovka, settlement, NEB, 54.18 109.53; (183) Sredniy Peremoy (Srednij Peremoj), channel, SD, 52.33 106.73; (184) Srednyaya (Srednjaja, Srednââ), channel, SWB, 52.33 105.40; (185) Svyatoy Nos (Svjatoj Nos, Svâtoj Nos), isthmus, SNI, 53.55 109.00; (186) Svyatoy Nos (Svjatoj Nos, Svâtoj Nos), peninsula, SNI, 53.70 108.80; (187) Tal'tsy (Tal'cy), settlement, SWB, 51.99 104.67; (188) Tankhoy (Tanchoj, Tanhoj), settlement, SEB, 51.56 105.12; (189) Tashkay (Taškaj), settlement, MM, 53.04 106.96; (190) Tikhoy Galutay (Tichoj Galutaj, Tihoj Galutaj), channel, SD; (191) Tipuki, settlement, VAD, 55.87 110.05; (192) Tolbazhikha (Tolbažicha, Tolbažiha), river, SD, 51.94 106.20; (193) Tolstyy (Tolstyj), cape, SWB, 51.79 104.61; (194) Tompa, settlement, NEB, 55.13 109.75; (195) Tompuda, river, NEB, 55.12 109.75; (196) Torey (Torej), lakes, E, 50.10 115.50; (197) Turka, settlement, SEB, 52.95 108.22; (198) Turkulik, river, NEB, 54.26 109.48; (199) Tyya (Tyja, Tyâ), river, NWB, 55.61 109.34; (200) Ukhan (Uchan, Uhan), cape, MM, 53.07 107.40; (201) Ulan-Ude (Ulan-Ude), settlement, E, 51.83 107.60; (202) Ushkan'i (Uškan'i), islands, UI, 53.85 108.70; (203) Ust'-Anginskiy (Ust'-Anginskij), bay, MM, 52.78 106.56; (204) Ust'-Barguzin (pre-1957), settlement, SNI, 53.45 108.99; (205) Ust'-Barguzin (post-1955), settlement, SNI, 53.41 109.03; (206) Utulik, settlement, SEB, 51.54 104.05; (207) Valukan, cape, NEB, 54.30 109.45; (208) Verkhnaya Angara (Verhnjaja Angara, Verhnââ Angara), river, VAD, 55.80 109.80; (209) Verkhnaya Zaimka (Verhnjaja Zaimka, Verhnââ Zaimka), settlement, VAD, 55.85 110.15; (210) Vydrinaya (Vydrinaja, Vydrinaâ), river, SEB, 51.48 104.62; (211) Vydrino, settlement, SEB, 51.47 104.64; (212) Yarki (Jarki, Ârki), island, VAD, 55.75 109.75; (213) Yedor (Edor), islet, MM, 53.24 107.44; (214) Yelantsy (Elancy), settlement, SWB, 52.80 106.40; (215) Yepishkinaya (Epiškinaja, Epiškinaâ), channel, SD, 52.35 106.69; (216) Yezovka (Ezovka), river, NEB, 54.59 109.50; (217) Zaimka, river, VAD, 55.85 110.14; (218) Zama, settlement, MM, 53.46 107.51; (219) Zavorotnaya (Zavorotnaja, Zavorotnaâ), bay, NWB, 54.28 108.47; (220) Zavotonyy (Zavorotnyj), cape, NWB, 54.29 108.50; (221) Zmeinaya (Zmeinaja, Zmeinaâ), bay, SNI, 53.77 109.02.

APPENDIX 2

List of authors' surnames. Each entry includes the following data: (a) surname of the author transliterated from the Cyrillic original using the transliteration rules of PGN/PCGN 1947; (b) surname of the author transliterated using the rules of GOST 1983 (= UN 1987), and ISO 9:1995 (= GOST 2000), added in parentheses only if different from the PGN/PCGN style; (c) surname of the author used by him or her in his or her non-Cyrillic papers [square brackets].

Adamtsevich (Adamcevič); Alferaki [Alpheraky]; Antontseva (Antonceva); Arkhipov (Archipov, Arhipov); Badmayev (Badmaev); Balduyev (Balduev); Baranyuk (Baranjuk, Baranûk); Batrayeva (Batraeva); Belyaev (Beljacv, Belâcv); Belyshev (Belyšev); Bobrovskiy (Bobrovskij); Bogorodskiy (Bogorodskij); Borovitskaya (Borovickaja, Borovickaâ); Boyarkin (Bojarkin, Boârkin); Boyko (Bojko); Cherepanov (Čerepanov); Degtyarev (Degtjarev, Degtârev); Dement'yev (Dement'cv) [Dementiev]; Doppel'mayr (Doppcl'majr); Dorogostayskiy (Dorogostajskij); Dorzhiev (Doržiev); Dubeshko (Dubeško); Dvoryadkin (Dvorjadkin, Dvorâdkin); Dyagilev (Djagilev, Dâgilev); Favorskiy (Favorskij); Galaziy (Galazij); Gilevich (Gilevič); Golovushkin (Golovuškin); Goroshko (Goroško); Imetkhenov (Imetchenov, Imethenov); Izmaylov (Izmajlov); Izmet'yeva (Izmet'eva); Kartashov (Kartašov); Khabayeva (Chabacva, Habaeva); Khidekel' (Chidekel', Hidekel'); Kishchinskiy (Kiščinskij, Kišinskij); Kitayskiy (Kitajskij); Knizhin (Knižin); Korchagin (Korčagin); Koryukin (Korjukin, Korûkin); Koshelev (Košelev); Kozhov (Kožov); Kozhova, Kožova, Kožova; Kroshkin (Kroškin); Kurochkin (Kuročkin); Kuznetsov (Kuznecov); Kuznetsova (Kuznecova); Ladeyshchikov (Ladejščikov, Ladejŝikov); Logachev (Logačev); Lyamkin (Ljamkin, Lâmkin); Malyshev (Malyšev); Matveychuk (Matvejčuk); Matveyev (Matveev); Menzbir [Menzbier]; Meshcheryakova (Meščerjakova, Mešerâkova); Miteyko (Mitejko); Mizandrontseva (Mizandronceva); Molozhnikov (Moložnikov); Murashov (Murašov); Myasnikov (Mjasnikov, Mâsnikov); Myslitskaya (Myslickaja, Myslickaâ); Neyfel'dt (Nejfel'dt) [Neufeldt]; Nikhileyeva (Nichileeva, Nihileeva); Novokhtko (Novochtko, Novohtko); Ochagov (Očagov); Olovyannikova (Olovjannikova, Olovânnikova); Pastukhov (Pastuchov, Pastuhov); Perfil'yev (Perfil'ev); Pershin (Peršin); Petrochenko (Petročenko); Popovskaya (Popovskaja, Popovskaâ); Pozdnyakov (Pozdnjakov, Pozdnâkov); Prokop'yev (Prokop'ev); Pronkevich (Pronkevič); Ptushenko (Ptušenko); Pyzh'yanov (Pyž'janov); Radnayeva (Radnaeva); Razmakhnina (Razmachnina, Razmahnina); Razvozzhayev (Razvožžaev); Ryabcev (Rjabcev, Râbcev); Sharoglazov (Šaroglazov); Shchepin (Ščepin, Ŝepin); Shcherbakov (Ščerbakov, Ŝerbakov); Shikharbeyev (Šicharbeev, Šiharbeev); Shimarayev (Šimaraev); Shinkarenko (Šinkarenko); Shkatulova (Škatulova); Shtegman (Štegman) [Stegmann]; Shugayev (Šugaev); Shul'pin (Šul'pin); Shvetsov (Švecov); Shvetsova (Švecova); Sirokhin (Sirochin, Sirohin); Skryabin (Skrjabin, Skrâbin); Sludskiy (Sludskij); Stepantsova (Stepancova); Sum'yaa (Sum'jaa, Sum'âa); Sushkin (Suškin); Syroechkovskiy (Syroečkovskij); Tanichev (Taničev); Timoshenko (Timošenko); Tolchin (Tolčin); Tolchina (Tolčina); Tomkovich (Tomkovič); Tret'yakov (Tret'jakov, Tret'âkov); Tupitsyn (Tupicyn); Unzhakov (Unžakov); Vasil'chenko (Vasil'čenko); Vodop'yanov (Vodop'janov, Vodop'ânov); Vorob'yev (Vorob'ev); Votintsev (Votincev); Vronskiy (Vronskij); Yegorov (Egorov); Yelayev (Elaev); Yesheyev (Ešeev); Yudin (Judin, Ûdin); Yumov (Jumov, Ûmov); Zakharov (Zacharov, Zaharov); Zharov (Žarov); Zhukov (Žukov); Zhuravlev (Žuravlev).